THE STUDENT'S GUIDE TO POLITICAL ECONOMY

SPENCER

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THE STUDENT'S GUIDE TO POLITICAL ECONOMY

A MANUAL FOR CLASSES AND STUDENTS
IN COMMERCIAL SCHOOLS

BY

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PREFACE

This book is an attempt to present most of the main principles of Economics in a form suitable to those students who are commencing their acquaintance with the subject.

The author's obligations to eminent contemporary economists are considerable. He is particularly indebted to the works of Professors Marshall, Nicholson, Bastatle, Cannan, and to those of Pierson and some American writers. And he desires to record his gratitude to the teacher from whom he long ago derived inspiration, Mr. J. A. Hobson.

F. H. SPENCER.

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THE STUDENT'S GUIDE TO POLITICAL ECONOMY

CHAPTER I

INTRODUCTORY

The Scope of the Subject.

ECONOMICS, or Political Economy, is the study of mankind in relation to wealth. The economist is concerned with the motives and actions of men when they are engaged in producing, exchanging, sharing, and consuming wealth. Thus economics is the study of man whilst engaged in what is often (and properly) called "getting a living." The very large majority of people in all countries obtain a living by producing wealth; there are some, everywhere, who produce no wealth but consume some; and all, whether they are both producers and consumers, or whether they are consumers only, share in the results of the continuous wealth-producing efforts of humanity. The economist, therefore, seeks to describe the way in which wealth is produced, shared, and consumed; to analyse the processes which he describes, and so to arrive at an orderly body of knowledge. Thus, economics is a science. It is a body of organised knowledge. The principles deduced by the economist may, of course, be applied. For instance, they may be used (or their use may be advocated) in settling a scheme of taxation, in deciding a national policy with regard to foreign trade, in framing a monetary system, in regulating conditions of employment. In so far as economics is directed to the solution of practical problems, it is an art. Thus few works on political economy are concerned with pure science alone. Most of such works deal with both theoretical and applied science.

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Economic Laws.

The principles discovered or the generalisations made by the economist are "economic laws." They resemble other "laws" of science in that they are merely general statements that, given certain causes, certain results will ensue. They must not be mistaken for imperative laws such as are administered in courts of law. In so far as they are correctly stated, wise men will always recognise their existence; but they may do so whilst preventing rather than forwarding the effects which a law states will follow from certain causes. We may know that the law of gravity will operate to our ruin if we do not prevent its operation; so we may resist the operation of some economic "laws" if we think fit.

Wealth.

The subject matter of economics being the making, sharing, and consumption of wealth, it is necessary to define that term. This is not an easy matter. The most familiar things are often very difficult of definition. We all know a chair when we see one: but how many of us can frame a definition of that homely object which will survive criticism? Similarly we all think we know what wealth is. A great economist (John Stuart Mill) wrote, "Everyone has a notion sufficiently correct for common purposes of what is meant by wealth." But the definition[1] which he subsequently framed is no longer generally accepted. What we have to do is to express, with as great precision as possible, what the meaning of the word "wealth" is when used in a plain and ordinary sense. It is necessary for this purpose to proceed as follows:—let us call all desirable things *goods* or *utilities*. Then wealth will consist of goods or utilities, but not all goods or utilities will be wealth. Thus, strength is a desirable thing. But everyone knows that a strong man is not necessarily wealthy, and may, indeed, be destitute. So that we must first exclude from our definition of wealth all those goods or utilities which

[1] "All useful or agreeable things which possess exchangeable value."

are *internal* or *personal*. Such goods are often a cause of wealth to the individual possessing them, but they are not wealth. Secondly, some goods are so much in excess of the needs of mankind that they have never become appropriated either by individuals or by collective groups, whether local, national, or international. Thus the atmosphere and the open sea have not been appropriated. Such things do not form any part of the wealth of an individual, of a state, or a group of states. They would, therefore, be left out of account in any computation of wealth ; and we shall exclude all such good from our notion of wealth. They are *non-economic goods*. Again, we could classify goods or utilities [1] as being either material or non-material. But we shall exclude no goods from our conception of wealth merely because they happen to have no material existence. For instance, a certain West End shopkeeper, let us say, has acquired such a reputation for producing stylish and well-fitting garments that a large number of rich people always go to him for their clothes. The relation between him and his regular customers is called the goodwill of the business. If an estimate of the value of shopkeeper's assets were made by a valuer, a sum would, properly, be included for the goodwill of the business. This purely non-material utility is thus ordinarily regarded as a portion of the shopkeeper's wealth. Nor are utilities to be excluded from the notion of wealth because they have only a very temporary existence. When Tetrazzini sings a song she produces a utility just as truly as does the baker who bakes a loaf. The song gives pleasure and, sometimes, prevents pain. To give pleasure or prevent pain are the only ends which any utilities, silk or surgery, pig-iron or pickles, radium or radishes, can serve. The song is a utility though its existence is but momentary ; it is limited in quantity ; it is very much the singer's property, for she can, if she pleases, extract a very large sum from her hearers before

[1] Economists, following the practice of philosophers, have chosen to use the word utilities rather than the simple and beautiful term goods. For the sake of uniformity we shall follow this practice.

producing it. Her possession of it and control over it are complete.

Again, wealth is not necessarily appropriated by individuals. Many utilities are the collective property of bodies of individuals, whether states, local communities, or non-political corporations. Many forms of material wealth, as harbours, ships, implements of war, factories, machinery, railways and rolling stock, are, in civilised lands, sometimes public and sometimes private property. So, natural resources, such as space, the soil, minerals, wood or water, may be appropriated by the state (or a combination of states), a local political body, or a non-political corporation, or by private persons. Of course, where a corporation consists of the aggregate of a number of shareholders, we must consider the corporation property as economically (though not necessarily legally) the private property of the shareholders. Thus the property of an Oxford College is collective property. The property of the Great Western Railway Company, for our purposes, must be regarded as the private property of the shareholders.

We are now in a position to define wealth. Wealth may be *individual* or *collective* (*social*). By individual wealth we mean all those external goods, whether material or non-material, which are the property of a person. Collective wealth consists of the same classes of goods owned by some collective body, such as a state, a local community, or other corporation not consisting of shareholders or partners.

Under the term collective wealth some writers (and especially continental writers) would include the institutions of a state, *e.g.*, its legal or its educational system. But such things seem to bear the same relation to the state as personal qualities (internal goods) do to an individual. They may be a very important factor in the creation of wealth, just as strength, dexterity, character, or eyesight may be the source of individual wealth. But the source of a stream is not a stream itself: a cause is not an effect. And in common practice we should exclude such institutions from a catalogue

of a nation's wealth. If a statistician were estimating the national wealth, he would not include in his estimate the money value of such institutions. He could value the ships in the navy; but how could he compute the value of its organisation? To include such items in our definition of wealth is to strain unduly the meaning of the word. It is to confuse the causes of wealth, or the results following from certain degrees of wealth, with wealth itself. The extension of the meaning of the word in the way described results in the confusion of two very different things, wealth and welfare.

Goods or *Utilities* are those things, whether material or non-material, which give pleasure or convenience, or diminish pain or inconvenience: that is to say, which yield a satisfaction.

Utility.

The power of a commodity to yield satisfaction (either by increasing pleasure or convenience, or by diminishing pain or inconvenience) is said to be its *utility*. This utility is measured by the sacrifice (usually of money) which persons will make in order to acquire the object the use of which yields the satisfaction. Thus, if a person will give 4s. 6d. for a new hat, but will give no more, the utility of the hat to him is measured by 4s. 6d. If he would also give 4s. 6d. and no more for a bottle of whisky, then the utility of the hat and of the whisky to him are the same. Whether his taste in estimating equally the satisfaction to be derived from the hat and the whisky is good or bad, is no immediate concern of the economist at this stage of his work. Utility must not be confused with usefulness in the ordinary meaning of the term. Usefulness means power of producing some satisfaction which is generally considered by good men to be desirable. Utility means "satisfaction-yielding capacity," and the *quality* of the satisfaction is not our immediate concern.

Production.

We cannot produce matter. We can only change the situation or the form of matter so as to make it yield satisfaction

to us. Thus *production means the creation of utilities.* If the reader will trace out the history of a loaf of bread, he will see that, from the first act of its production until it entered his house, all concerned in producing it were merely engaged in so arranging matter that what was less desirable became more desirable. This was true of the ploughman, of the sower, the reaper, and all engaged in growing the wheat, of those who stacked it, who threshed it, took it to market, sold it, bought it, graded it, transported it, ground it into flour, mixed it into dough, baked it (or so placed it that it was baked), sold it in the form of bread, and finally delivered it.

The salesman, therefore, has performed services of exactly the same kind as the ploughman. He has rendered some matter a little more desirable than it formerly was; that is to say, he has created utility. Production is this and nothing more.

Productive and Unproductive Labour.

As mankind can only produce utilities, all labour which is successfully directed to the production of utilities must be said to be productive labour. It matters nothing whether the object produced is material or non-material, temporary or permanent. A clerk who adds a column of figures correctly is as truly engaged in productive labour as a bricklayer who lays a row of bricks. A musician who successfully conducts the Eroicà Symphony is as productively engaged as a naval architect who designs a first-rate liner. The shopman who sells a dozen yards of calico is as true a producer as the cotton operatives who were engaged in the different stages of its manufacture. Provided all these persons successfully create some utility, they are engaged in productive labour. There may be too many clerks, musicians, or shopmen; they may be engaged in ways that are socially unprofitable or noxious; but the same may be true of bricklayers, naval architects, or cotton operatives. The wall may not be wanted, or may form part of a building which is intended for degrading

purposes; the ship may be used for destruction, or for harmful luxury; the cotton operatives may be engaged in the production of false goods with which Hottentots or Kroomen are to be cheated. Any form of labour may be applied in anti-social ways; but the producer of any utility *is a producer*, whether the product be a sewing-machine or a sermon.

Consumption.

Consumption is the opposite of production. It means the destruction of a utility by use. Bread, when eaten, is said to have been consumed. Leather made into a pair of boots, *as leather*, has been consumed. The term consumption is also applied to *holding for use*; thus the consumption of a chair or a picture may be said to commence when it passes into the possession of any person who proposes to use it.

Generally the production of finished articles may be said to conclude, and their consumption to commence, when the goods pass over the retailer's counter.

Keeping these leading ideas in mind, we pass to the study of the demand for goods.

CHAPTER II

DEMAND

The Demand for Goods.

Some goods exist in such quantities that the supply of them is always greater than the demand for them, that is to say, every person can *entirely* satisfy himself. For instance, the air is free to all, similarly sea water, so long as it remains in the sea, is so plentiful that no one is able to charge for its use. It is so abundant that it has no exchange value. Similarly land, in some places and times, has been so plentiful that everyone in its vicinity could take as much as he pleased. Goods of this kind are sometimes said to be non-economic. On the other hand, the supply of some goods is less than the demand for them would be if people were free to take whatever they required. The supply of boots is insufficient to allow every person entirely to satisfy his requirements. So is the supply of bread, and meat, and vegetables. For such classes of goods, therefore, the demand is permanently in excess of the supply. These are *economic goods*. Inasmuch as they are needed, and can only be obtained by effort, people are induced to produce them in order either to consume them or to exchange them for other such goods. The economist is principally concerned with the terms upon which, and the extent to which, people can satisfy themselves with these economic goods.

Now let us remember that air is a non-economic good only because everyone has, or can at any moment obtain, as much as he desires. No one will pay anything, under normal conditions, for, say, a cubic foot of air, just because he can get all he requires to use without any sacrifice. His wants in this respect are, or can be, satiated without his making any sacrifice of effort or money. But imagine a man locked up in a tiny cupboard, every aperture in which had

been hermetically sealed. He would soon begin to want air very badly. Very soon he would be ready to exchange all he possessed for a very small quantity of air. A cruel person standing outside might be able to make the suffocating sufferer promise all he possessed in order that a tiny breathing aperture might be bored through. Imagine the size of this aperture to be very slowly increased, and the supply of air, therefore, to be slowly increased ; then, as the quantity of air available for breathing became greater, the price which the prisoner would give to obtain more of it would diminish, until, as soon as he could breathe quite easily, he would refuse to pay anything for any additional increase in the air-supply. Thus we see that the more of a thing a man has the less he wants any more of it. This is true of almost every commodity men consume. Let us suppose that, when the price of a pair of boots is 30s., a man who earns a modest income will buy, on an average, one pair a year ; then, a fall in the price of boots, say to £1, would mean, perhaps, that he would buy three pairs in two years ; at 15s., he might buy two pairs a year, at 10s., three pairs a year, and, if the common price of boots became 7s. 6d., he might go in for a variety of footwear and buy four pairs in a year. For one pair a year he will give 30s. This satiates his want for boots to a certain extent ; and in order to induce him to increase his stock he must be enabled to purchase each succeeding pair by a smaller and smaller sacrifice of money. The more boots he has the less is his need for any more boots. In other words, each succeeding pair of boots that he purchases has a diminishing utility. This is an illustration of the *Law of Satiable Wants* or *Diminishing Utility : each equal addition to one's stock of a given commodity has a smaller utility than the last previous addition.* It follows from this that, in order that an increased supply of any commodity may be disposed of in a given community, supposing population and the level of income to remain constant, the price must be lowered ; and, conversely, that every rise of price will be accompanied by a diminution in the quantity disposed of.

Of course it is perfectly true that if we were considering the demand of any individual we could not depend upon a fall of price being accompanied by an increase of demand. If the price of boots falls from 15s. a pair to 10s., John Smith, who already buys as many boots as he wants, or who wears only sandals, may not be affected by the fall. But when we are considering a market, that is, buyers in general, these individual idiosyncrasies will count for very little, and universal experience teaches us that *a fall in price is followed by an increase in demand, and a rise of price by a decrease in demand.* This statement is called, *The Generalised Law of Demand.* Or we may state it thus : demand increases as price falls. Demand diminishes as price rises.[1]

Elasticity of Demand.

The decrease of demand which follows a given rise in price is much greater in the case of some articles than in the case of others. Let us suppose, for instance, there is a very learned book upon a subject in which very few people are interested. It is highly probable that if the publishers fixed the price at ten shillings the sales would not be very much greater than if the price had been fixed at a guinea or even at thirty shillings. Experience has shown, however, that a fall in the price of bicycles, for instance, has been accompanied by very large extensions of the sale, and that a rise would be accompanied by a great curtailment of demand. When a fall of price brings about a comparatively large extension of

[1] The reader must be careful to note that the Law of Diminishing Utility and the Law of Demand are not postulates. We do not take them for granted. We derive our knowledge of them from experience ; and this experience may be verified by reference to any market reports, or by personal application to any stockbroker or fishmonger. Indeed, like most scientific generalisations, they are merely given their grand names in order to save us the trouble of having constantly to repeat statements over and over again. Science very largely consists in making general statements which, it is thought, experience justifies, and then giving such statements names. The reader should consider how convenient it is to call a rifle " The Lee-Metford " instead of having to describe it, lock, stock, and barrel, every time we mention it.

demand, (where the demand *stretches out* as the price falls), then the demand is said to be *elastic*. The extent of the increase consequent upon any given fall of price is said to be the degree of *Elasticity of Demand*. Of course, where a demand is elastic for a fall of price, it is also elastic for a rise. If a fall brings about a comparatively large extension of demand, a rise will bring about a comparatively large diminution of demand.

It is not possible to state comprehensively what are the classes of articles for which the demand is elastic or inelastic respectively. But several facts may be noted:

(1) There are class demands. A fall of 20 per cent. in the cost of 12 h.p. automobiles may bring about a very large increase indeed in the demand for those vehicles among the automobile using class; but no reasonably possible fall of price would stimulate a demand for such machines among the lower-middle, or the wage-earning classes. This is true of most costly articles of luxury: the demand for them is very elastic amongst the class which habitually consumes them, but, below that class there is no demand at all.

(2) The demand for goods of general consumption which are not prime necessities is always elastic when the price is relatively high. For instance, when new laid eggs are nine a shilling, every increase in the number to be obtained for a shilling brings about a large extension in demand. But when the price is comparatively low, say sixteen a shilling, the demand may become comparatively inelastic: a fall to seventeen a shilling might not greatly extend the demand.

(3) The demand for prime necessities is inelastic. Thus, as a type of a prime necessity, we may take bread. A rise in the price of bread is not accompanied by a falling off in the demand for it. It is the most important and, on the whole, the most economical food stuff of the great majority of people in the western civilised world. Neither falls nor rises in its price, therefore, greatly affect its consumption.

People must have it ; and, if the price rises, they buy the same amount of bread and less of other foods. Indeed, as Sir Robert Giffen has shown, they may even consume more, for the rise in the price of bread may make them unable to afford some other food, *e.g.*, meat, and therefore compel them to buy more bread.

The probable elasticity of the demand for the commodity in which he deals is a problem of great interest to a man of business. Those who put articles on sale at a fixed price, and do not sell in definitely organised markets, are constantly faced with problems in elasticity of demand. Will it pay better to put a book on sale at 7s. 6d. or 5s. ? Can the two-shilling new novel pay ? Shall a penny paper be changed to a halfpenny paper with a larger circulation and higher advertisement rates ? Will it pay a tramway company to adopt halfpenny stages ? Is it wise to issue season tickets on the Tube ? All such questions turn on elasticity of demand. So with taxation. Will an additional tax on a commodity, by raising its price, so diminish the demand as to cause loss rather than gain to the Treasury ? Will dealers in the taxed commodity be able to add the tax to the price, and so recover what they pay to the Treasury from the consumer, without killing the trade ? Or to take a Prussian example : If the Government raises fares all round on the State Railways, how many first-class passengers will ride second-class, how many second-class passengers ride third, how many third-class ride fourth, and how many journeys will disappear ?

The Order of the Satisfaction of Wants.

We have considered the rules which apply to the demand for commodities : that the more a man has of a thing the less he wants any more of it : that, therefore, an increased stock of a commodity can only be disposed of by lowering the sacrifice required in exchange for each unit, or, as it is generally put, falls of price tend to bring about extensions of demand, whilst rises of price tend to diminish demand. And we have also noted that demands vary in elasticity : a similar fall or rise

of price is followed in the case of various commodities by very different results. The question now arises: What determines the order in which wants are satisfied? Let us consider the case of the head of a family whose total income amounts to £100 a year.

The family wants numerous things if it is to maintain existence in the state of civilisation, to which the society, in the midst of which it lives, has attained. Its most obvious wants are food, clothing, shelter; moreover, if it is an English family, it will certainly require furniture, warmth, recreation, books, holidays, and very many other things. These things will, from time to time, be bought, and the wise husband (or, more probably, wife) will constantly be thinking how the weekly income can be best spent. That is, he or she will constantly be comparing the urgency of the wants which clamour for satisfaction. Coal is wanted badly in mid-winter, so that the purchase of new boots for Johnnie must for the present be deferred. A house with one more room is very desirable, but that would involve withdrawing Dick from the trade school in order to earn a few shillings a week, at the cost, however, of Dick's future career. The husband's overcoat is still serviceable, though begrimed by much driving of Scotch expresses between Euston and Crewe, but Mary's frock is positively in holes, which fact tends to diminish her self-respect; therefore, as the personal appearance of Mary is of greater importance than that of a bread-winner verging on middle age, Mary gets the new frock and the engine-driver's coat has to wait. It is considerations of this kind, operating continuously through the year, which will determine the distribution of the year's income amongst its possible uses. Let us suppose that the expenditure, when it is reviewed by the enlightened engine-driver and his wise wife, at the end of the year, is found by them to be entirely satisfactory. They conclude that they have spent the money, in their judgment, "to the best advantage." They do not wish they had spent a pound less on food and a pound more on fuel, a shilling less on bacon and a shilling

more on boots. How shall we, in our terminology, express the manner of this entirely wise expenditure? Obviously, they have been engaged in estimating the comparative utility of the articles on which the income has been expended. Or, rather, they have been engaged in comparing the utility of shillings spent in one way with that of shillings spent in other ways; and, if their expenditure has been to the best advantage, then the utility of the shilling spent with greatest reluctance in any one way has been just as great as that spent most reluctantly in any other way.

Thus, if they have spent £40 on food, £20 on rent, £10 on clothes, £5 in renewing furniture, £8 on fuel, £5 on holidays, £1 on books, £3 on other amusements, £8 on clubs, insurance, and saving, then the utility of the pound spent most reluctantly on each object must be the same. *In other words, money will have been spent to "the best advantage" when it has been distributed between its several uses, present and future, so that it has, in each use, the same marginal utility.* For the pound spent most reluctantly on any given object we may call the marginal pound spent on that object; and its utility the marginal utility of the money so spent.

If greater satisfaction would have been obtained by spending, say, £39 on food and £11 on clothing, or by spending £9 on fuel and only £4 on holiday, then the utility of the fortieth (*i.e.*, the marginal) pound spent on food was less than that of the tenth pound spent on clothing, and that of the fifth pound on holiday less than that of the eighth pound on fuel. And the satisfaction to be obtained out of the expenditure of any given sum will only be at its maximum where the utility of the marginal unit expended in each use is the same. It is such a distribution of expenditure that all those who endeavour to spend "economically" are constantly trying to attain.

We may put this very important truth in another way. When any individual expends his resources in the best possible way (that is to say, in the way which gives him the greatest satisfaction), he satisfies his wants out of the resources at his

disposal in the order of their urgency. As his most urgent want becomes satisfied its urgency diminishes, and, at some point, becomes no more urgent than some other want. At this point it is a matter of indifference to him whether he chooses to satisfy the first want or that which now presents itself. But the moment the point of indifference is passed, and no sooner, he will begin to satisfy his second want concurrently with the first. As this proceeds his two wants become less and less urgent, and presently their urgency is no greater than that of a third want. The third want then begins to be satisfied concurrently with the first two. And this process continues throughout the whole range of his wants until his resources are exhausted. The amount that he expends on the satisfaction of each want will be determined by its comparative urgency, most being spent on the most urgent wants, least on the least urgent ; and, at any given moment, the satisfaction obtained out of the units of his expenditure which are *at the margin* of his expenditure in each several case, will be the same. Of course, each individual will determine for himself the relative urgency of his wants ; and education, indeed civilisation, consists in training people to make "higher" wants relatively more urgent. All the economist has to say on this point is that wants, the satisfaction of which is essential to that state of physical, intellectual and moral strength necessary for the efficient production of goods, are more urgent than any others. In a healthy State, therefore, endeavour will be made by statesmen to see that opportunity is afforded to the whole population to reach some minimum standard in the satisfaction of such wants.

Hitherto we have been discussing the distribution of the money possessed by an individual among its possible uses. For this is the form which the problem usually takes nowadays. The argument, of course, applies equally to the distribution of *any commodity* between the uses to which it could be put. If a man has a stock of grain for use, he will endeavour to employ it in accordance with the urgency of each use ; he

will use some of it as food for himself, some to feed his farm stock, some to brew beer or distil spirits. As the utility of each unit applied in the most urgent use diminishes, a point will be reached in which the grain will yield as much satisfaction in the second use as it now does in the first. Expenditure of the commodity in its second use will then commence, and presently, a third use will begin to be as urgent as the first and second now are, and the commodity will begin to be applied to the third use; and this process will continue for all the possible uses. At any given moment, if the amount of satisfaction to be obtained from the consumption of the commodity is to be the maximum, the utility of the portion last applied in each one of the several uses must be the same. Further, it should be noted that the utility of the stock for any of its possible uses may vary very greatly according to circumstances. In a besieged town the utility of grain may become so great that none of it can be spared for brewing or distilling, or for feeding cattle.

Finally, it must be remembered that the argument we have applied to the distribution of a stock whether of money or of another commodity between its uses by an individual applies to the application of national resources to their uses. The whole stock of wealth, material or non-material, which results from the combined efforts of all the people composing a nation may be considered the *national income* or *dividend*. If the maximum amount of satisfaction is to be got out of the consumption of this national dividend, then the commodities of which it consists must be used to satisfy needs of people in the order of their urgency. The utility of the marginal portion applied in each separate use will need to be the same. And questions of this kind will force themselves upon consideration: is the utility of that portion of grain which is now being applied with greatest difficulty as food for human beings (*e.g.*, that portion of bread which a very poor family can only just afford to buy) as great as the marginal portion applied as food for fowls, or as material for brewing or distilling? The answer for the citizen and the

statesman will depend upon their conception of the relative urgency of competing wants. And the greatest variety of opinion will be forthcoming as to the machinery by which we can legitimately and effectively secure that the wants of a whole population are satisfied, approximately, in the order of their urgency.

CHAPTER III

VALUE AND THE PRINCIPLES OF EXCHANGE

The Relation of Value to Utility.

We have shown that the wants of anyone for anything can be satiated: that the more one has of a thing the nearer one is to satiation point, that is to say, the less one wants any more of it. As the number of units of any commodity in possession becomes greater, the utility of each unit to the owner becomes less. The estimation, therefore, put upon each successive unit acquired, that is, the *value* of that unit must, therefore, diminish.

The estimation put upon the first unit acquired will be much greater than upon, say, the tenth. We may measure the estimation which is put upon any given unit by the inconvenience which any given person suffers by going without it, or the convenience which arises to him from having it. This convenience or inconvenience, in our country and time, is measured in terms of money. Thus, for instance, we may imagine A being willing to pay, within a given period of time, 100s. for one unit of a commodity, rather than go without it altogether; but he would only value a second unit at 95s., a third at 80s., a fourth at 70s. In fact we could, by a study of the actual dealings of any person, construct a schedule showing the amount he would buy at any given price. But incomes and tastes vary. Thus we may very well suppose A, B, and C, having different incomes, tastes, and circumstances, valuing successive units as shown at top of following page.

The demand for any commodity of general consumption is composed of the demand of a very large number of A's, B's, and C's, whose individual demand schedules will vary very greatly. Thus, whilst A will buy eight units at a price of

	A.	B.	C.
1st unit	100s.	80s.	50s.
2nd ,,	95s.	75s.	30s.
3rd ,,	80s.	60s.	15s.
4th ,,	70s.	50s.	10s.
5th ,,	55s.	35s.	5s.
6th ,,	40s.	30s.	2s.
7th ,,	35s.	15s.	1s.
8th ,,	20s.	10s.	1s.
9th ,,	—	5s.	—
10th ,,	—	2s.	—

20s., we notice that he will, at that price, entirely satisfy himself. He is well-to-do, and at 20s. can afford to buy as much as he would at any price. B, on the other hand, can only be induced to buy a seventh unit if the price is as low as 15s., but he will buy ten units if the price goes as low as 2s.; but C, who requires a price of 15s. to induce him to purchase three units, will only buy six when the price is as low as 2s. He requires a price of 1s. in order to induce him to buy the seventh and eighth units; and no price will induce him to buy more. Now it is plain that, if the market consisted of A only, in order to sell eight units to A the commodity would have to be offered at the price of 20s., thus if eight units are sold to him the value of the commodity per unit will be indicated by 20s., that is to say, 20s. is the sum at which A estimates the satisfaction to be got by adding the eighth unit to his stock. He reaches the margin of his purchases at the eighth unit, and the value of all the units is indicated by his estimation of the utility of that unit. Thus we say that *the value of any given quantity of goods will be indicated by the utility of the marginal portion sold*, or more briefly *by the marginal utility of the goods*, that is, by the utility of that unit of the commodity which the purchaser is only just induced to buy, and the seller finds the greatest difficulty in selling.

So much for the case of A, an individual purchaser. The

direct value per unit of the commodity to him, at any stage of his purchase, is measured by the sacrifice which he makes rather than go without that unit which he needs least, and therefore purchases most reluctantly. But the demand for goods of general consumption is composed of the demands of a very large number of buyers. In this case all the irregularities which are to be found in the demand schedule of any individual will disappear; and we may rightly assume (as indeed the universal experience of ordinary business proves) that any increase in the stock of the commodity will be accompanied by a diminution of the utility of each unit. Moreover, as in every society the number of people whose incomes are large is very small, and the number of people whose incomes are small is very large, it will be true that large quantities of goods will only be taken at low prices, *i.e.*, the rate at which the utility of successive additions to the stock of *most* buyers diminishes will be very rapid. Thus C in the above schedules is the typical buyer. Let us consider the following schedule of prices which might be given for newspapers by A, B, and C. Let us suppo e A is a rich man, who cannot do without news, say a statesman; that B is a moderately well-to-do person who takes an interest in affairs, and that C is an ordinary wage-earner, whether in a black coat or overalls, with no special need for news; and, further, let us suppose that the respective numbers of A's, B's, and C's in the population are as 1 : 200 : 10,000. Then the demand schedules of A, B, and C respectively may be as follows:

Units purchased within one week at the prices named.

	A. (1)	B. (200)	C. (10,000)
1st unit	100s.	10s.	6d.
2nd ,,	20s.	5s.	4d.
3rd ,,	10s.	2s.	1d.
4th ,,	5s.	9d.	½d.
5th ,,	2s. 6d.	8d.	½d.
6th ,,	2s. 6d.	6d.	½d.

and it will be seen by inspection of these demand schedules that the actual demand schedule for newspapers will be :

Price.	Number sold in a week.
100s.	1
20s.	2
10s.	203
5s.	404
2s. 6d.	406
2s.	606
9d.	806
8d.	1,006
6d.	11,206
4d.	21,206
1d.	31,206
½d.	61,206

Thus whilst A would have bought a daily paper had the price been half-a-crown, and 200 B's would have bought it had the price been 6d. there are 10,000 C's who will buy one every weekday when the price is ½d. and will not buy it at a higher price than ½d. If therefore 61,000 papers are to be sold weekly, they must be sold at ½d. each, and the A's, B's, and C's will all, of course, get it for the same price. Thus the value of the paper as actually sold to the public, that is, its *value in exchange* or its *market value*, is governed not by the estimate placed upon the utility of a daily paper by A, but by its utility to the 30,000 people who were only induced to buy it because the paper could be purchased for ½d. and not more. *Thus the value, per unit, of the quantity sold is the estimate placed upon the utility of the marginal units.* Whether we are estimating the direct value per unit of a given quantity of any commodity to an individual, or the value per unit to the whole body of persons desirous of possessing it, that value will be indicated by the utility of the least needed portion, that is of that portion which is sold with greatest difficulty.

Consumer's Surplus.

The reader should note that A would have given fifteen

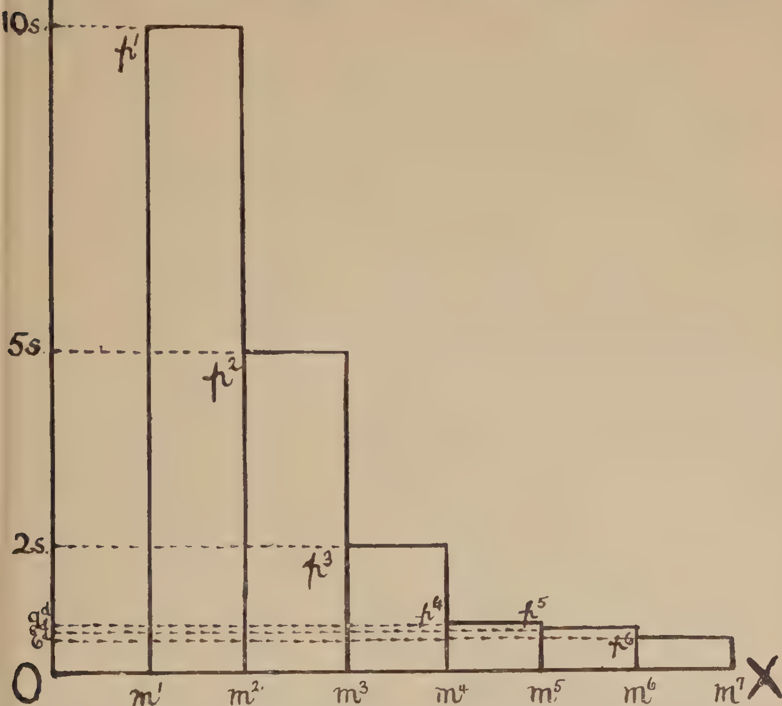
shillings, and B would have given three shillings for the week's supply of newspapers which they actually get for threepence. They thus get a satisfaction for one-sixtieth and one-twelfth, respectively, of what they would have given for it. Even C gets six newspapers for threepence, whilst the actual satisfaction yielded to him by those papers would be measured by 6d. + 4d. + 1d. + 1½d or 1s. 0½d. If we reckon A's and B's surpluses in this way, they are, of course, many times larger. According to either fashion of calculation it can be shown that every purchaser gains by living in a society in which exchange takes place, and in which the number of possible buyers is very large. It is only because as many as 60,000 papers are required that they can be sold for ½d. each. Thus the actual price paid for an article can never be greater than the measure of the satisfaction it yields, and it is usually very much less. The excess of the satisfaction yielded, over the price actually paid is called a *consumer's surplus*. It is a surplus of satisfaction not due to the unaided efforts of the individual, but due to his membership of society. If he is a working member of society, of whatever grade, he, of course, helps to create it. If he is not, he does not. (See diagram on p. 23.)

Value in Exchange and Cost of Production.

The reader will have noticed that utility and value are two opposed terms. The utility of a commodity is its power of affording satisfaction to us, of conferring pleasure or diminishing pain.[1] Its value is the estimate we put upon it, or rather upon a unit of it, *because* it has that power. The utility of an ounce of toffee is its power of satisfying us with its sweetness and thus adding to our pleasure or, what is the same thing, driving away some pain. Its value is the degree with which we want it *because* of that quality. And its value in exchange is the sacrifice we are prepared to make rather than go without it, this sacrifice being most conveniently measured

[1] Its utility, of course, always has reference to some person, or group of persons, and is thus relative or extrinsic, not intrinsic.

Note that with each increase in a person's stock of any given commodity the total utility of the stock increases, but it increases at a diminishing rate, for, as a rule, the utility of each unit added is less than that of the last preceding one. We may illustrate this by a diagram. Let us take B's demand schedule, see p. 20, as an example.



The number of newspapers bought, the price paid, and the degree of satisfaction yielded by each unit are all *quantities*, and therefore can be measured. Let prices be measured along the vertical line OY and the number of papers bought at each price measured along the horizontal OX. Then the rectangles p^1m^2, p^2m^3, and p^3m^4, p^5m^6, p^6m^7, will measure the utility of each successive purchase. The sum of the areas of all the rectangles will represent the total utility of the six newspapers, the area p^6m^7 the utility of the paper which yields least satisfaction, or the marginal utility of this quantity of newspapers, whilst that portion of the sum of the areas cut off above the line qp^6 represents B's consumer's surplus, if we take *his* demand schedule only into consideration. His actual consumer's surplus on the combined schedules of A, 200 B's, and 10,000 C's, is of course many times greater than this.

in terms of money. Thus we say that the value in exchange of an ounce of toffee is one penny. The penny is not the amount of satisfaction we get out of the toffee. It may not, and usually will not, measure the sacrifice any particular purchaser would make rather than go without the particular ounce just purchased. But the quantity of toffee put upon the market being what it is, the size of the market being what it is, and the tastes and incomes of the people being what they are, it is found that that quantity can be sold at that price and at no higher price. The one penny per ounce thus measures the utility per ounce of those ounces of toffee which would not be sold were the price a little higher. It measures the marginal utility of the whole stock of toffee disposed of; the utility of toffee to those who want it, not most urgently, but least urgently. Here we imagine someone saying that toffee is sold for a penny an ounce because, including the profit of the producer, it costs a penny an ounce to make it. In other words, that the value in exchange of an article depends upon the expenses of its production. This conception we must examine.

First let us distinguish between the *real cost* and the *money cost* or *expenses of production*. The real cost of producing an article consists of all the efforts and sacrifices which are made in the course of its production. Thus, before a coat can be sold, wool has to be produced, to be spun, woven, dyed, and finished, the garment has to be cut and made; and we could, of course, elaborate the description of the process very greatly indeed. It will be seen that capital has had to be used in the form of tools, implements, and machinery. Many different kinds of labour have been employed. Shepherds and shearers, seamen and stokers, railway workers of a dozen classes, combers and carders, spinners, weavers, dyers, cutters, tailors, and salesmen, each using some form of capital, have been engaged in the production of the coat. The real cost of production consists of the efforts they have made, the wear and tear of the fixed capital used, and of the materials used up in making the goods. Thus an analysis of the process of producing

any given article would enable us to name the *factors of production* used: (*a*) various kinds of labour and services, *e.g.*, agricultural labour, transport services, the services of managers, firemen, skilled and comparatively unskilled workmen, designers; (*b*) various kinds of capital; (*c*) land. And the combinations of these factors are almost infinite. Each of these factors has to be remunerated or purchased; and the sum of these remunerations, together with the fund necessary to replace the materials used up, and to allow for the depreciation of the fixed capital used, would give us the money cost or expenses of production.

Now it is plain that the organiser of the business must get such a price for the commodity he produces as will, ordinarily, cover these expenses of production, including a *profit* or remuneration for himself. For he produces, say, coats, normally, not *merely* for pleasure (though this does not preclude him, or any of the work people concerned, from taking pleasure in their work), but in order that he may make a living; and, unless he covers all the expenses of production, including his own profit, that living will not be made. It is perfectly correct, therefore, for the organiser of the business, the *undertaker* as Adam Smith called him, the *entrepreneur* as he is now usually termed, to consider all the wages and salaries paid to those whose labour was used in producing the wares, as expenses of production. To him they *are* expenses. But a moment's thought will show that, like his "profit," they are truly not expenses of production, but *shares of the product*. This is none the less so because those engaged in production do not usually share the commodity produced, but the price which that commodity fetches. Imagine a group of men engaged in the production of some ordinary commodity. One member provides knowledge and ideas, another capital, another land, others their physical strength or mechanical skill. Accounts may be settled between the members of the group at the end of the year though sales take place continuously. Some members are unable to wait until the end of the year for the whole

of their share, and advances are made to them out of the product of the current sales. Such advances are plainly advances out of the income of the society obtained by sales of the product; they are not part of the cost of the enterprise. The cost consists of the efforts of the workers, manual or mental, or both; and the wear, tear, and consumption, or "using up" of the capital, whether in the form of tools, machinery, buildings or other material. But if we imagine all the manual workers and clerks to arrange for a fixed wage instead of a share, and the landlord to take a fixed rent, the co-operation in taking the risks of the business disappears, the risks of the enterprise are taken by those who take the surplus at the year's end, but the wages and rent are, from the social point of view, a portion of the income of the enterprise, and they are cost only from the point of view of the remaining entrepreneurs.

Remembering clearly then that the "cost" of production is made up of things so distinct in character as the efforts of human beings, and the using up of machinery, tools, implements, and raw material; and that the expenses of production consist of the payments made for these efforts and sacrifices, let us consider whether the exchange value of an article is determined by the expenses of its production. In some cases it plainly is not. A painting by Rembrandt was recently sold for £100,000. What relation has that price to the expenses of producing the picture? No one knows what the original expenses were; what we do know is that it cost the seller, or those who left it to him, a comparatively small sum, and that, far from its costing them anything in the interim, they have been enjoying its possession ever since. Or consider the case of a scientist who writes the most learned possible work on Palæontology, a work so learned and profound that only half a dozen persons in the world besides himself can understand it. Far from the exchange value covering the "cost" or even the expenses of production, the book is hardly likely to have any exchange value at all. Will a lady's straw hat, of last year's fashion, sell this summer

for the expenses of its production? Cases of this kind could, of course, be multiplied. If, therefore, we wish to have a statement which will cover all the cases, we had better say that the value in exchange of a commodity is the estimate of the marginal utility of the stock sold, and that its price will be its marginal utility as measured in money. Thus the price to be obtained for corn, or wool, or cloth, or calico will not be determined by the expenses of producing those things plus the profits which the entrepreneur expects. He may get these expenses, including a reasonable profit, or he may get very much more or very much less. And as the expenses of no two in any trade are the same, it is easy to see that there are no fixed expenses of production.

But this is by no means all that we have to take into account. It is plain that if the price which can be obtained for an article does not cover the expenses of its production to the entrepreneur, reckoning his own "profit" as part of those expenses, he will not go on producing indefinitely, and the supply of the commodity will be diminished. On the other hand, if the price to be obtained more than covers the ordinary expenses of production including such profit, then, obviously, as soon as this becomes known, and provided the business is not one which is a monopoly, producers will be attracted into the business and the supply of the commodity increased. Now these movements in and out of the business cannot be effected instantaneously; they need time. And time is the element which, hitherto, we have left out of consideration. At any given moment it is perfectly true that value in exchange will be indicated by the utility of the marginal portion of the commodity being exchanged. But whether or not it will *exist* in order that it may be exchanged will depend upon whether or not that value as measured in money—in other words *the price*—normally covers the expenses of production. Some writers admit all this, as they must, and dismiss the subject by stating that the value, as indicated by marginal utility, determines what direction production will take, in what businesses capital and labour will be employed, but

that this determination of the direction of business does not affect the question of *value* at all. When we take account of *time*, however, we see that changes in the expenses of production have their effect in determining the quantity of the stock to be disposed of, and therefore in determining the value of the *whole* of that stock, just as changes in habit and custom and taste affect the capacity of that stock to satisfy people's needs. We cannot say that, in ordinary cases, it is merely demand which settles that toffee shall be sold at a penny an ounce, because the persons who need toffee least will give a penny for an ounce and no more. That penny an ounce must also cover the expenses of the producer who only just gets ordinary profits and who could not go on producing were the price a little less. So, if by some change in production, *e.g.*, a large increase in the supply of sugar, a great fall in the price of transporting sugar, the introduction of new machinery, or the like, it becomes possible to the typical toffee-maker to produce the toffee, hitherto sold at a penny an ounce, for a halfpenny an ounce, no doubt at first the toffee will be still sold for a penny. But, then, profits will be abnormal. There will be a great increase in the amount of toffee made, and, if it is to be sold, the price will fall. This increase in the supply will continue so long as the profits are abnormal, and the price therefore must fall until the expenses of producing toffee under the least advantageous circumstances are just covered. Thus it is not sufficient to say that the value has fallen because, the stock to be disposed of being greater, the utility of the marginal portion is less. Plainly the value has fallen not merely because the quantity now to be disposed of is so large that at any higher price some of it would not be taken, but also because that quantity can now be put on the market at a halfpenny. Value is affected from the side of supply, as well as from the side of demand.

At any given time the value of a commodity is an estimate of its marginal utility. But where commodities are being continuously produced it will also be indicated by its marginal expenses of production; that is to say, by the cost

of producing that part of the supply which is produced under the most disadvantageous circumstances. Value will be *governed* by causes operating on both sides. Any change in the tastes, habits, or needs of a community, will affect the utility of any commodity to its members, and therefore the utility of the marginal portion, and thus the price at which it will be bought. But any change in the expense of production will affect the *possibility* of selling any given quantity at the price which could be obtained for it.

We may say, then, that the value in exchange of the whole stock of a commodity is always indicated by the marginal utility of that stock, that is, the value of each unit is equal to the value of that unit which is least needed, and is therefore exchanged with the greatest difficulty. And the value of the commodity, therefore, at any given moment, can be said to be indicated by its utility only. But if we take a period of time long enough to allow ordinary changes in business to take place, then the price to be expected by the producer must be such as to cover the expenses of production, including the ordinary rate of profit to the producer. If it is less than that people will go out of the business, the supply of the commodity will fall off, and exchange value per unit will rise. If it is greater than the expenses of production people will be attracted into the business, the supply of the commodity will increase, and its exchange value per unit will fall. And, as we know that the whole stock of a commodity will not be produced under equally advantageous circumstances, the value must tend to equal the expenses of the production, including profits, of that part of the supply which is produced under the most disadvantageous circumstances. Thus, whilst the value of a commodity is always indicated by its marginal utility, it will, over an ordinary period of time, be found to be indicated also by the marginal expenses of production. The normal value, that is, the value to be expected to rule over a period of time long enough to allow the ordinary economic motives to work themselves out, will be that at which the marginal utility, measured in money,

is equal to the marginal expenses of production. Further, if we lived in a stationary society we should find that the value of a commodity only temporarily departed from the normal. If the value went below the normal, production would fall off until diminution of supply had raised values again, perhaps above the normal. If the value rose above the normal the supply would increase and the value per unit sink, perhaps again, past normal value. Thus the normal value of a commodity, during any given period of time, would be that value to which the temporary values tended to return. This, in a stationary society, would be fixed.

But society is not stationary. On the one side the tastes, habits, intelligence, and level of income of people are constantly changing and thus affecting the character of demand by altering our ideas as to the relative utility of different classes of foods.[1] On the other hand, modes of production are constantly changing; communication and transport are constantly improving. Such forces are continuously operating to alter the conditions of supply. Society being thus dynamic rather than static, the normal value of any commodity is, itself, constantly in process of change. Thus, though for any given period there will be a normal value for any commodity, to which temporary or market values for the time tend to return, yet the normal value is variable. Market values are not best figured by a pendulum swinging about a fixed centre. The movements of value are not always smooth and rhythmical, and the centre to which they return is itself in movement.

The reader, if he has thoroughly grasped the foregoing, will not fall into the error of supposing that the value in exchange of any commodity is *caused* by, or *governed*, or *determined* by its marginal utility, or by its marginal cost of production. Value in exchange is only determined by marginal utility, or, if we take *time* into account, by the

[1] Consider, for instance, how the tastes of people in respect of food and drink, clothing, holidays, amusements, have constantly been in process of change during the last century or so.

coincidence of marginal utility and marginal expenses, in the sense that the value of the marginal units indicates the value of the whole stock. But the causes which govern value are those which determine utility on the one side and the expenses of production on the other; and these causes are both numerous and complex. All the causes which affect the demand for goods, which enable us to consume more, or fewer, or different goods; and all those which affect in any way the conditions of production, which make goods easier or more difficult to produce will operate also on value. But they will operate, if at all, by changing the marginal utility of the commodity, or the marginal expenses of its production, or both. And after such changes in either or both, it will be the value of the marginal units which again will indicate the value per unit of the whole supply.

Joint and Composite Demand; Joint and Composite Supply.

A demand for a printed book involves a demand for all the factors of production of that book. The demand for the book is *direct;* the demand for paper, printing ink, cloth, and cardboard is *indirect or derived;* and the demand for the book is a *joint demand* for these factors. A joint demand may, therefore, be defined as a direct demand for a commodity involving a derived demand for its factors of production. It will be seen that almost all demands for finished goods are joint. Consider, for instance, all the factors which are involved in a demand for a suit of clothes, a hat, boots, a sandwich, a locomotive, a cab-ride, and so forth.

A little thought will show that, owing to this almost universal phenomenon of joint demand, the forces which operate on the value of any factor of production are complicated. The value of compositors' labour, *i.e.*, the wages of compositors, is affected by considerations relating to such other factors as the cost of paper, of ink, of machinery, of other forms of labour than composing, and of the demand for books and newspapers. Assuming that books are being sold for

prices which yield the publishers only the normal rate of profit, then it will be difficult for the printers to demand more for their work, unless the demand for books happened to be very inelastic, so that a rise in price did not destroy the demand.[1] Similarly their rates of wages might be affected by some change in the price of paper or other factors used in the production of printed matter. Again the wages of riveters (*i.e.*, the price of their labour) may be affected by circumstances affecting any of the thousand and one things which are jointly demanded when a modern ship is ordered.

A complete analysis of the complicated problems arising out of the fact of *joint demand* cannot be undertaken in an elementary work. But, in general, it may be said that the circumstances most favourable to the rise in the value of any one factor, jointly demanded with other factors, are:

(1) That the demand for the finished commodity shall be inelastic.

(2) That the factor, the value of which is to rise, shall be answerable only for a small part of the expenses of production, of the finished commodity.

(3) That the factor shall be indispensable.

(4) That the supply of that factor shall not be easy to increase.

It should be noted, however, that as the expenses of obtaining any factor increase there will be a tendency to substitute some other factor for it. This will actually take place as soon as the substitute is no more costly than the original factor. Thus *the law of substitution* is constantly tending to operate. There is no "only way." The increasing costliness of one factor merely operates to encourage the substitution of another.

Composite Demand.

Most factors of production, and especially the principal raw materials, and the services of most kinds of workmen

[1] And of course, even under these unlikely circumstances it would be necessary for the compositors to be completely organised.

are required for more than one use. The demand for the commodity, therefore, is composed of the demands arising from the several uses to which it can be put. Thus the demand for steel is composed of contributory demands arising out of the use of steel for making hundreds of things, from pen-nibs to battle-ships. Similarly, india-rubber is put to very many uses, the very name "rubber" now indicating only a minor use. So the services of an engineering fitter may be required in the manufacture of textile machinery, locomotives, marine engines, electrical machinery, or internal combustion engines. The principal interest of the fact that the total demand for any given factor of production is composed of contributory demands arises because these contributory demands compete with each other. Thus, the great increase of the use of rubber for tyres has not only stimulated the production of rubber, but, as the supply has not been equal to the demand at old prices, the normal price of rubber has risen, and rubber has been driven out of some of its former uses. Only those uses which are profitable at the new level of price can continue. Here, again, it must be remembered that the law of substitution tends constantly to act. A rise in the price of rubber tends to bring rubber substitutes into use.

Joint Supply.

The production of one commodity often necessarily involves the production of another. Thus the supply of mutton involves a supply of sheep-skin and wool; the supply of beef involves a supply of hides, and horns, and hoofs; the supply of wheat involves the supply of straw; the supply of coal-gas involves the production of coke, coal-tar, ammonia, and other products; cotton cannot be spun without the production of cotton waste. All these are cases of joint production or supply. There are probably few businesses in which no "by-products" are forthcoming; and, in many cases, the operations of a firm, when not *necessarily* involving joint production, can very easily be extended to do so. The same

"underground" trains which have for their main business the transport of passengers may very easily take parcels also. The chemist keeps a lending library. A newspaper is always a joint product, it supplies news and comment to the purchaser, and publicity to the advertiser.

This fact of joint production is very important, especially with reference to the determination of value. Obviously where a single firm is engaged in the production of more than one commodity, the expenses of production, which in the long run the entrepreneur must realise, can be spread over all the products. It will pay him to sell one joint product at prices yielding less than normal profits, or even at a loss, provided the difference can be made up on the sale of the other joint products. The income yielded by advertisements enables newspapers and magazines to be sold at prices far below the cost per copy of producing the paper. This principle is, of course, no discovery of the economists. "What we lose on the swings we make up on the roundabouts," is merely a succinct expression of the not infrequent effects of joint production. The price to be obtained for wheat will affect the price which can be taken for straw. Mutton, which is the main product in England of the sheep grazier, is, or, rather, before the invention of refrigerating machinery was, almost a by-product in Australia. The price of residuals has a very important controlling effect on the price of gas; and examples of this kind are very numerous indeed.

Composite Supply.

The total supply of some commodities is made up from a number of separate sources. Thus, as we have already noted, light is supplied naturally by the sun, the moon, and the stars, or artificially by candles, oil, gas, electricity, and so forth. Such a supply is said to be composite. Similarly the supply of meat is composite; or, to take a more comprehensive commodity still, the supply of *food* is composite. So, also, the supply of building materials, floor coverings, power, amusement, and almost every comprehensive "good" is composite.

The total supply is made up of separate commodities, each, in some degree, a substitute for any other.

The importance of the phenomenon of composite supply is that such a supply is composed of alternatives. A man who is going to organise a factory can decide whether he will use wind-power or water-power, steam-power, gas-power, or power derived from electricity or petrol. He will use that which he decides to be most *economical, i.e.*, that which is most efficient per unit of cost. So that these forms of power may be viewed as competing with each other, as, indeed, through the agency of human beings, they most certainly do. Thus the *Law of Substitution* is constantly tending to act. In all cases where the supply is composite, a rise in the value of one of the contributory components of the supply causes a substitute to be sought, and, as soon as that substitute becomes as economical as the component originally used, it tends to supplant the original component. Thus, the demand for any one of the components of a composite supply is prevented from being as inelastic as it otherwise would be. There is a tendency at work constantly to prevent the existence of monopolies, and to level the values of each of the components of a composite supply. A rise in the price of meat tends to diminish the demand for meat and increases the demand for bread. A rise in the price of sweets tends to drive the little children who buy pennyworths to the purchase of the other little luxuries which children like.[1] A fall in the price of petrol would tend to promote the substitution of internal combustion engines for steam-engines. In short, the illustrations of the action of the Law of Substitution are very numerous. Some of the most important are to be found in the cases where machines can be used in substitution for human labour. The initial effect of such a substitution is

[1] In the course of a deputation to the Chancellor of the Exchequer it was stated that the rise in the price of sweets, due to the imposition of the import duty on sugar, actually had this effect, children being very keen buyers, seeking full value for each penny expended.

usually to diminish the demand for the services of some particular kind of labourers. But history shows us that wherever the use of machines involves a great saving, the commodities produced can, and probably will be sold at much lower price. The demand for them therefore increases, and the total demand for the services of the same, or some other workmen, usually increases also in the long run; whilst, of course, the consumer of the goods benefits.

A consideration of the phenomena of Joint and Composite Supply, and Joint and Composite Demand will give the student some idea of how complicated are the ultimate forces which control the exchange value of things.

Monopoly Values.

It will be observed that our expectation that the normal value of a commodity will tend to be measured by the marginal expenses of production of the commodity, presupposes the existence of fairly free composition. We assume that if abnormal profits are being made in any industry the fact will soon become known, that capital and labour will, with fair rapidity, be attracted into that industry, that the supply of the commodity will be increased and its value, therefore, fall. We do not assume anything like *perfectly* free competition, for that can never exist till all men are far better supplied with knowledge and judgment than they now are, nor until financial self-interest is a more dominant motive than we hope it ever will be. We do assume, however, that, on the whole, knowledge of what businesses "pay" very well and what do not is pretty rapidly diffused, and that, on the whole, men, in the process of getting a living, tend to be actuated by their own financial interests, though this will not be their *sole* motive. Assuming such conditions the value of a commodity, under normal circumstances, will be measured by the utility of the marginal portions exchanged, and, also, by the marginal expenses of its production.

If there is no such freedom of competition obviously there will be no force at work tending to reduce profits to some

"normal" level. For instance, let us take the case of the Post Office. This Department has a monopoly of the business of letter carrying, the telegraph, and the telephone services, and a practical monopoly of the business of savings banks, and the transmission of small sums of money. That is to say, the Post Office has, in some cases, a complete, in others a virtual monopoly in the production and sale of certain commodities. What economic forces control the values of those commodities? Obviously, the department will not, under ordinary circumstances, be run at a loss. The actual expenses of production will have to be covered. But what force, other than political pressure, is to prevent the Department from fixing its charges so as to obtain a much greater profit on its outlay than would be expected by the owners of a railway or st amship company. If the profits are abnormal the law will not allow competitors to step in. Thus, assuming that the main object of the Department were pecuniary gain, the prices of the commodities it furnished would be fixed at such levels as would yield the greatest profit. Of course a monopoly in public hands is not, usually, conducted for profit only. But where a monopoly is in the hands of ordinary business folk they are not subject to competition of other producers, and there is no economic guarantee that the prices they charge will tend down to the expenses of production, including normal profits, for their class of business. The value of their product they will fix themselves. And that value will tend to be fixed at the point which yields them maximum profits.

In fixing this value they will, of course, have to obey the law of demand. As a general rule, they will find that the higher the price the smaller the demand for what they produce, the lower the price the larger the demand. If they can make larger profits by selling small quantities at high prices than by selling large quantities at low prices they will do so. Experience will teach them which is the more profitable course. The existence of a monopoly does not necessarily mean high prices. Whether or not the owners of monopolies charge

high prices will depend a good deal on whether the demand for the commodity they produce is elastic or not. If the demand is inelastic, that is, if a change of price affects the demand comparatively little, then a high price will tend to be fixed. If the demand is very elastic, and the commodity is one which can be produced upon a large scale, then the price will tend to be low, for a rise of price will mean a comparatively large falling off in demand.

It is worthy of notice, at this point, that the elasticity of demand will be governed very largely by the possibility of substituting something else for the monopolised commodity. Thus, let us suppose the Standard Oil Trust, if it exists when this book is published, has a complete monopoly of the supply of petroleum oil in England, and its organisers are considering what is the most profitable price for them to sell at. They may argue that artificial light has become a necessity, that the demand for a necessity tends to be inelastic, and that, therefore, they can raise their prices without very seriously diminishing the demand for oil. But they would soon have to consider that there are a number of alternative sources of artificial light, coal-gas, electricity, candles, and so forth. The price, therefore, which can be successfully asked for oil will be governed by the price at which substitutes for oil can be obtained.

If there is competition in the production of these substitutes, their value will tend to have some relation to the marginal expenses of their production. Thus it is argued that even in the case of monopoly value, forces act from the side of supply, not only to fix the minimum price which the entrepreneurs must ask to recover expenses other than their own remuneration, but in placing an upper limit to the price they can fix so as to raise that remuneration to a maximum.

Markets. Demand and Supply.

One of the most valuable rights sometimes possessed by a mediæval feudal lord was the right to hold a market. For, in every district, it was a great convenience for the whole

countryside to know that, on a certain day, at a certain time, buyers and sellers would assemble in a particular place. Thus there would be a reasonable prospect of obtaining or disposing of goods. The market, in other words, facilitated exchange ; and, upon exchange the whole industrial activities of society, except in the most rudimentary stages of civilisation, must depend. The lord thus derived income from tolls on goods brought to market, and the people benefited by increased facilities for exchange. These facilities consisted, not merely in the greater assurance that sellers could dispose of their goods and buyers could obtain what they needed, but in the fact that the price justified by the conditions of the moment would be ascertained. If two individuals, isolated from their fellows, drive a bargain there is no guarantee that one will not be able to take advantage of the necessities, the ignorance, or the inferior bargaining ability of the other. In the absence of market facilities we may imagine a poor farmer, badly in need of money, selling his corn or his wool to a skilful but unscrupulous buyer for much less than the price ruling in some distant centre, to which he has no access, from which he gets no news. And it would be easy to conjecture instances of a seller taking similar advantage of a buyer. In fact, one of the best illustrations of this is provided by the history of money-lending. A money-lender is a person who sells the *use* of money for a given period for a consideration which we call interest.[1] So long as money-lending went on among isolated lenders and borrowers, and the borrowers were usually needy and lacking in bargaining ability, usurious rates of interest were common ; and the injustices perpetrated by the sellers of the use of money (the money-lenders) were such as to bring down the condemnation both of law and public opinion on their trade. But, as the banking system developed, when borrowing and lending began to be organised, and the borrowers were the equals of the lenders in bargaining ability, then rates of interest

[1] Hence the rate of interest is often termed the " value " or " price of money." It is, of course, more properly, the price of credit.

began to be fixed like other prices. The poor man, provided he could offer security, borrowed at a rate fixed by the forces of competition in a money market, not as the result of an isolated and frequently unequal bargain.

In a market sellers are in touch with sellers, buyers with buyers. Sellers know the prices their competitors are asking; they can ask no more; and, if their goods are not sold at that price, they may be compelled to compete with their fellows and ask less. On the other hand, buyers know what prices other buyers are offering. They can offer no lower price, and, to get the goods they require, they may be compelled to offer more. There is thus competition amongst the buyers and amongst the sellers respectively; and the effectiveness of the market depends upon the efficiency with which knowledge of the dealings taking place is diffused. This is the fundamental characteristic of a market. The more quickly each dealer can be informed of the dealings of others the more rapidly will inequalities of price disappear. Thus a *market* may be defined as a group of dealers in such close touch with each other that prices rapidly and smoothly tend to one level; and a perfect market would be that in which, at any given moment, there was but one price for the same commodity.

We may speak of the "area" of a market. For the group of buyers and sellers among whom, and at any given time, a single price for any given commodity tends to prevail may be large or small; they may consist of a little local group or they may be a very large group indeed, scattered over a country, a continent, or, in some cases, the world. Down to the end of the eighteenth century markets were, as a rule, local. Even for such commodities as the various kinds of grain different prices would rule in different parts of our own country.[1] To-day we may, without exaggeration, say that for some commodities, the market is world-wide. Prices in one part of the world influence prices in another, and over a

[1] Small and temporary variations, of course, still exist between one wheat market and another. Formerly very high and very low wheat prices might coexist within one political boundary.

world-wide area such prices (after allowing for cost of transport, insurance, agency charges, and customs duties) tend to be the same in all parts of the world.

The causes which have operated to increase the size of markets are the constant improvements in the means of communication and of transport. The establishment of a regular and cheap postal system, the institution of the telegraph and telephone, the great developments of railway and steamship services, if they have not annihilated distance and time, have done much to overcome them. Buyers and sellers of some goods in Chicago, New York, Liverpool, London, Frankfurt, and Odessa, are in closer touch to-day for the purposes of dealing than the inhabitants of Salisbury, Trowbridge, Devizes, and Marlborough were a hundred years ago.

But not all commodities can be bought and sold in very large markets (world markets). The conditions which the commodity for which the market is to be very large must satisfy are as follows:

(1) The commodity must be in almost universal demand. Most of the primary foods and raw materials satisfy this condition. There are very few places in which wheat, rice, meat, and sugar are not required. So iron and steel, tin, copper, leather, some varieties of timber, gold, credit, cotton, wool, and silk are useful and therefore saleable almost anywhere. And so are some kinds of stocks and shares.

(2) The commodity must be *transportable*, both in the sense that it must not be perishable, and that it must be sufficiently valuable in proportion to its bulk to bear the cost of carriage. Modern means of storage and transport have rescued some commodities (*e.g.*, meat, vegetables, butter) from the category of perishables; and more things will now bear the cost of carriage than ever before in history. Nevertheless it is hardly probable that, say, ordinary bricks, or fresh flowers, or straw, will ever be considerable items in ocean or transcontinental trade.

(3) The commodity must be capable of exact description,

or of being graded or sold by sample. Thus, about stocks or shares there can be no mistake. One unit of Consols or Union Pacifics is just the same as another in kind and quality, and must necessarily be so. Similarly standard gold is standard gold, and there can be no mistake. Most of the foods and raw materials are numbered or named according to their varieties. Thus we find grain sold as No. 1 Northern Duluth, or choice white Karachi. So cotton is sold as American, Pernam, Parahyba, Macejo, Ceara, Egyptian, Brown, M. G. No. 1 Oomra, and the like. Sugar is sold as Granulated Standard, Crystal Extras, and so forth. Similarly, iron, wool, and other staple commodities are sold according to descriptions which make the grades of the commodities perfectly clear to buyers though they may not see even a sample of what is offered or purchased.

The Determination of Market Price.

The generalised law of demand, which, as we already know, is an expression of experience, tells us that the lower the price of a commodity the greater the quantity which will be purchased at any moment. Similarly we know from experience *that the higher the price the larger will be the quantity offered for sale at any given moment.* This we may call the *Law of Supply.* And if we conld find out the facts with regard to the supply of, and the demand for any given commodity on a market day we could construct a schedule of the demand for that commodity at the various possible prices, and a similar schedule of supply at those prices. Let us take for instance a wheat market, and suppose that prices can possibly range between 32s. a quarter and 38s. For months past, that is to say, prices have never exceeded 38s. for some standard quality, and have never fallen below 32s. Let us further imagine that the total supply at the command of the sellers is 10,000 quarters, and that the total requirements of the buyers, under the most favourable conditions to them, is, say, 12,000 quarters. Then, obviously, at a price of 38s. all the

wheat available, 10,000 quarters, would be offered, and the amount offered would diminish as the price fell ; at 32s. very little being offered. On the other hand, at 32s., the lowest price reasonably to be expected for months, probably, the buyers would *demand*, that is, *be ready to purchase and pay for*, 12,000 quarters, whilst as the price rose the amount demanded would diminish, and, unless some very considerable rise of prices were expected in the future very little would be bought at the top price of 30s. Thus the demand schedule and the supply schedule would be something like this :

Supply, *i.e.*, Number of quarters offered at each price.	Price, a quarter.	Demand, *i.e.*, Number of quarters buyers would be willing to take at each price.
500	32s.	12,000
1,000	33s.	11,000
3,000	34s.	9,000
7,800	35s.	8,500
8,300	*35s. 3d.*	*8,300*
9,500	36s.	6,000
9,800	37s.	1,000
10,000	38s.	600

Under these circumstances had the price quoted at the opening of the market been 32s., only 500 quarters would be offered but 12,000 quarters would be demanded. If the price rises to 33s. the holders of 500 other quarters come into the market, and, at the same time, the demand is diminished by 1,000 quarters, the would-be purchasers of 1,000 quarters at 32s. retiring from the competition when the price of 33s. is asked. At 34s. the holders of another 2,000 quarters come into competition with the other sellers, and potential purchasers of 2,000 quarters cease to compete with their fellow-buyers. Or beginning at the other end, we may note that, had the market opened at 38s., the whole of the available supply would have been offered ; as, however, at that price only 600 quarters would in any case be bought and as there would be no bids at all until those most urgently needing wheat were convinced that the price was going to remain at

38s., the wheat would soon be offered at 37s., 36s., and so forth, those more urgently needing to sell rapidly lowering the price, and this price gradually inducing more buyers to come into competition. Thus by a double process of competition, sellers competing with sellers, and buyers with buyers, changes of price would be effected, until, at last, the demand for wheat would be brought into equilibrium with the supply of it, for that day at any rate. And inspection of the schedules will show that this would take place at some price between 35s. and 36s. a quarter, say 35s. 3d., at which price 8,300 quarters are offered and 8,300 required. This we may term the market price for the day.

Of course it is highly improbable that the comparatively wide range of prices given in our schedules would be quoted on any one market day. What usually happens is that there is no one fixed market price, but that a small range of prices obtains, at several of which actual business during the day takes place. For instance, in the example we have been considering, possibly, the price at the close of the last previous market was 36s., which was rather above the recent average. At this price, therefore, the supply offered is large, only about 500 quarters of the total available supply being withheld by those who expect a still higher price at some future date, and who can afford to wait. The sellers find offers at 36s. not very readily accepted, as buyers have information which leads them to expect that the demand will not be very brisk. Thus, whilst there is some little trade at 36s. the price rapidly declines to 35s. 9d., 35s. 6d., and 35s. 3d., at which price most business is done. And if 35s. 3d. had been quoted without change throughout the day it is probable that 8,300 quarters would have been bought and sold. Small deviations from this price will occur. For instance, if, close upon the termination of the market, some buyers who have been expecting even lower prices begin to buy vigorously, the price may rise and the market close at 35s. 6d. Or needy sellers, who have expected a rise, are disappointed, begin to sell rapidly and send the closing price down to 35s.

So news from other quarters may affect prices. But during the day there will be a price, such as the 35s. 3d. we have named, to which momentary prices will be tending, and at which, were it maintained, supply would have been equated to demand. This we term the market price. It is, as it were, the normal price for the day. And it is determined by competition, (*a*) between sellers, (*b*) between buyers bringing about changes of price until supply and demand are equated.

It will be noted, too, that even market prices are not determined without reference to time. Past conditions of the market will affect quantities available, and the extent of present requirements and, therefore, the prices initially offered by either side. Both buyers and sellers, too, will have their eyes upon the future. They will judge as to what prices they may offer or accept, not merely with regard to the supplies and the requirements of the market day, but also with regard to the supplies and the requirements of the future. Thus the element of time enters even into the determination of those temporary values which we call market prices.

CHAPTER IV

LAND AND ITS RENT

Land and Its Rent. Introduction.

It is generally stated that the requisites of production are three in number, land, labour, and capital. If the number of the requisites is to be confined to three, and all things necessary to production other than labour and capital are to be classed as "land," it is plain that the word "land" must be given a rather wide meaning. For this reason some economists have used the word "nature" instead of "land." But, as, at least in English works, the term "land" is in general use it will be convenient to us to retain it. By the term land, therefore, we shall mean the soil and those other useful forms of matter which are the gift of nature to mankind. Thus we shall include water and other natural objects, such as timber, minerals, which do not owe their usefulness to human efforts. Further, it must be noted, that the owner of land owns also the benefits which accrue from the action of natural forces, such as the sunshine, rain, frost, snow upon the land. Apart from the action of such forces the efforts of the labourer in agriculture would have little result.

The most important property of land is that it provides space on which human activities can be carried on. Its fundamental property is extension. The utility of land when used for building, especially in towns, is derived almost entirely from this property. The power of the owner of land to obtain a rent for its use depends primarily upon his command over space. He commands the space upon which natural forces can act, and upon which men can rest or labour, whether in agriculture, manufacture, or commerce.

A factor which is of great importance in causing variations in the utility of land is its situation; that is to say, the position of any given area relatively to other areas. This, again,

is probably of greatest importance in the urban uses of land ; but is frequently of very great importance, too, in its agricultural uses. Finally, land varies in utility according to its fertility. Its fertility is determined, mainly, by the qualities and composition of soil and subsoil, and, in some countries, by its position with regard to the daily journey of the sun, its slope, and the possibilities of the natural or artificial supply of water.

The reader, therefore, must note carefully that land varies in quality, in more respects than one. These variations, whether of situation, or fertility, or whatever may be their nature, give rise to what we may conveniently term *differential advantages*. These differential advantages, which are not the handiwork of man, give rise to variations in the utility of land, and, therefore, as we shall see, to variations in its value.

Next it must be noted that land differs from labour and from capital because, unlike them, it is limited in quantity. The quantity of capital can be indefinitely increased, and has been increasing very rapidly in recent times in most civilised countries. The quantity of labour depends upon the number of human beings able and willing to do work. This is not arbitrarily limited, and seems capable of indefinite increase. The area of land available for human life is, however, definitely limited ; and it is out of the power of man, by taking thought, to increase it. No increase, therefore, in the supply price of land can operate to increase the supply of land, and as land, by definition, is the free gift of nature, there are no expenses of its production.

The value of land, therefore, will not be determined in quite the same way as the value of commodities which have not the special characteristics we have described. How, then, is its value determined ? As a rule, the value in exchange of land will depend upon the rent which can be obtained for its use. In fact, we commonly hear the value of land spoken of as so many "years' purchase," of the rent : meaning by rent the sum which can be obtained for its use during a year or other

period of time. Thus, we must inquire how the rent of land is determined. And it will be convenient to consider separately (1) The Rent of Agricultural Land; (2) The Rent of Urban Land and Buildings.

(1) The Rent of Agricultural Land.

Some land is more advantageous for agriculture than other land. The advantage may arise from superiority in fertility, in situation (*e.g.*, in proximity to markets), or from other causes. Now, if an unlimited amount of agricultural produce could be obtained from the most advantageous portions of land no one would use the less advantageous. But the amount of produce to be got out of any given area is limited. This follows from a tendency, the statement of which is known as *The Law of Diminishing Returns*. This law (or generalisation) may be put as follows: The amount of agricultural produce which can be obtained out of any given area is, at any given stage of agricultural knowledge, limited. Thus the amount of capital and labour which can be profitably employed on any given area is limited also. As the quantity of capital and labour employed upon a given area is increased, therefore, a point is reached at which the *rate* of the return yielded begins to diminish, and though, after that point has been reached, more produce can be obtained by using more capital and labour, yet the amount of produce which results from the use of each additional unit, becomes smaller and smaller, and would finally disappear.

It should be carefully remembered by the student that the above law is, like all other scientific laws, a mere statement that certain results ensue under certain conditions. It is not imperative. Any farmer may use as much capital and employ as many men upon an acre of land as he likes. But sooner or later the amount of produce which he gets for each pound he so expends will reach a maximum; from that point onwards it will diminish; and a point will be reached when he will be spending money for no result at all. The farmer

may act in this fashion if he pleases. All the "law" amounts to is a statement of what occurs if he does.

This law, like other scientific laws, is derived from experience. Consider what takes place when, let us say, a farm which has gone out of cultivation is brought into cultivation again. The soil has to be weeded, and cleaned, the ditches to be scoured, and certain operations, essential to any cultivation at all, have to be undertaken. But if these operations alone were carried out (*i.e.*, if only this amount of capital and labour, and no more, were used) there would be no return at all. Then the arable land would have to be ploughed over and sown, the pasture stocked (perhaps, at first, not up to its full capacity), and so forth. If nothing more were done some return would be obtained. But this return would probably be increased, more than in proportion, by a more thorough cultivation. Such an increase in the rate of yield could not, however, be indefinitely continued; though it is true that the farmer could profitably expend more and more capital and labour per acre until he had got his farm into first-rate condition. In fact, if he were a good business man with sufficient funds he would continue to increase the amount spent in fertilising, cleaning and tilling his land, and so forth, until he reached the point when he might just as well either till more land, or put his spare funds into some other business than farming. In so far as he acted on ordinary business principles he would continue to invest in the cultivation of his farm up to the point at which his investment would yield him as much as and no more than it would in some other use. At this point he would cease.

We see, then, that the tendency of land to yield a decreasing return to capital and labour expended upon it is quite an ordinary piece of knowledge. It is a phenomenon well known from the earliest times; and whenever and wherever the principal way of getting a living has been either by the pastoral use of land or by tillage, the operation of the law has resulted in migrations. The people, their flocks and their herds, increase in number, they cannot, in the state of knowledge to which

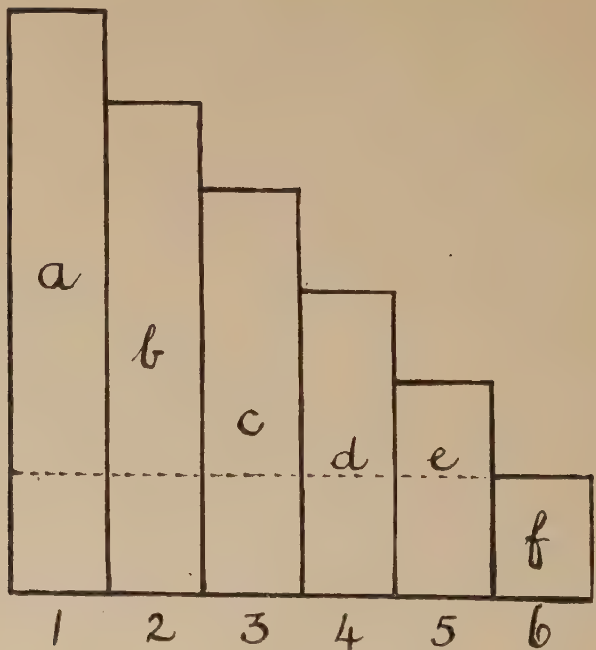
they have attained, provide more food either for themselves or their beasts, from the areas that they have been using. Hence they must move further afield, and so migrations, and sometimes wars of conquest follow. It was the law of diminishing returns which caused the parting of Abraham and Lot, and the great movements of people that we read of in ancient history. It is the operation of that law which is sending people from the United States to Canada to-day. For, were there no such tendency as is stated in the law, if the amount of produce to be got out of land could be indefinitely increased, why should the area of cultivation ever be extended ?

Of course the level of agricultural knowledge may be raised, new modes of cultivation adopted, and, consequently, the return per unit of expenditure increased. Changes of this sort have frequently taken place. For instance, the use of rotations of crops which do away with the necessity of allowing lands to lie fallow, the use of new fertilisers, the introduction of the intensive methods of the market gardener, and so forth, have all tended to increase the quantity of capital and labour which can be used on any given area before the return begins to be diminished. This, however, only means that the tendency to diminishing returns has been deferred, not that it has been defeated. It still operates on the new plane to which agricultural operations have been lifted.

Again, in a new country, where tillage is begun for the first time, it may be that cultivation can be intensified for some time with results more than proportionate to the expenses incurred. But here, again, this is merely because the point at which returns begin to diminish has not yet been reached, or because only the best areas out of those immediately accessible have been tilled at all, or because the best land has not been reached by the emigrant. As cultivation increases in intensity, however, the point at which a return less than in proportion to the additional outlay begins, will be reached. When the best spots have been, at last, occupied, and the cultivation of them has been pushed to its profitable limits,

then the law of diminishing returns in agriculture will be in complete operation in that country. In fact, it is in old developed lands that we must expect to find the tendency we are considering in full operation.

Now let us suppose that labour and capital are applied to a given area of land right up to the profitable limit. Some of the portions of capital and labour so applied will be of greater importance than others. To the more important portions, therefore, we may, legitimately, ascribe a larger part of the resulting produce than we do to the less important. We may, in fact, divide the total expended in cultivating the land into a number of units, and arrange these units in the order of their importance in producing the total result. This *order of importance* will not necessarily be the same as the *order of time* in which they were applied. Thus, if sowing the seed is more important than the first ploughing, we shall call the expenditure involved in sowing our first portion, although, in point of time it comes after the ploughing. These equal units of expenditure we may measure along a horizontal line, and the return due to them we may indicate by rectangles of heights proportional to the size of that return. The equal portions of the expenditure upon cultivation have been spoken of by previous writers as "doses." This is a convenient, though not elegant term; and we may use it. Let us suppose that the sixth "dose" only just "pays": that is to say, that the return obtained to it is no greater than would have been obtained from any other employment to which the "dose" might be put. Then, obviously, the cultivator will invest no more in that particular area. The sixth will be the "last" dose, in the sense that no more capital and labour than that for which it is the payment will be applied. It is the dose which is least willingly applied, because it is least remunerative. We have, in fact, reached the *margin of cultivation*. The sixth dose is the *marginal dose*, for another dose would take the cultivator over the margin of profitable use into unprofitable uses. Now let us suppose that the land in question is owned by one man and



worked by another, and that the rent is paid in produce. Obviously the cultivator will not invest " dose " six in the land unless he retains the whole produce due to that dose. Less would not pay him, for he can get as good a return by using his capital and labour either on other land, or in some other occupation. On the other hand, if he retains that portion it does pay him for the investment of that dose. And if it pays him to use the sixth dose, provided he retains the produce of that dose, a similar return will just induce him to invest either of the other five doses. It follows, therefore, that, if it is to be worth his while to cultivate the land, he must be allowed to retain as much of the return to each and all of the other five doses as is equal to the return to " dose " six. Let us indicate the returns to doses 1, 2, 3,

4, 5, 6, by the letters a, b, c, d, e, f. Then the cultivator must retain for himself 6f. The landlord may take the rest as rent. It pays to cultivate the land if the cultivator obtains 6f. If any cultivator will not pay this rent, someone else, under competitive conditions, will. Thus the rent of the land will be a + b + c + d + e + f − 6f, that is *the excess of the produce of each "dose" of capital and labour used over the produce of the marginal dose.* For since the cultivator retains the whole of "f," the return to dose 6 (the marginal dose) contributes nothing to the rent. In the diagram, rent is represented by the area lying above the dotted line. If we suppose the land to be of such a quality that the return per unit of capital and labour expended were no more than "f," then obviously such land could yield no rent. It would all be on the margin of cultivation; for, if the return were any less it would tend to go out of cultivation. Thus *the rent of any given piece of land may be said to be the excess of the produce of that land over that of the land on the margin of cultivation*, or the excess of the produce of any given piece of land over the produce of that land for which no rent can be paid.

This explanation of how the rent of agricultural land arises and is determined is called the Ricardian Theory of Rent; and the generalisation given above is Ricardo's Law of Rent. For though Ricardo did not discover it, his exposition of the nature of rent was more complete and definite than any which had preceded it.

The form in which the argument for the Ricardian theory of Rent was put gave rise to some criticisms which do not seem to be well founded. His exposition took the following general form:

In a newly settled country the settlers would occupy the best available land which may be called No. 1 land. If there were plenty of such land which could be freely occupied, then no one would pay anything in order to till soil which could be freely obtained. No rent, therefore, would arise. But, as population grew, the law of diminishing returns would operate. The settlers would be compelled to cultivate inferior land,

which we may call No. 2 land. Let us suppose that thirty bushels per acre of wheat could be obtained from No. 1 land by tilling it in the normal fashion, and that the yield of No. 2 land, under similar conditions, is twenty-five bushels per acre. Then, obviously, it would be a matter of indifference to the cultivator whether he cultivated No. 2 land and paid no rent, or cultivated No. 1 and paid a rent of five bushels. Thus, if land were private property and there was competition for it, the owner would be able to get a rent of five bushels for No. 1 land. As the demand for land increased, No. 3 land, which yielded, say, twenty bushels, would come into cultivation, the rent of No. 1 would rise to ten bushels an acre, and No. 2 would yield a rent of five bushels. Thus, as inferior grades of land were successively brought into cultivation, *i.e.*, as the margin of cultivation fell, rents would rise. The rent of any given area would be the excess of its produce over that of the land which yielded no rent, *i.e.*, the land on the margin of cultivation.

It was objected to this that, as a matter of fact, settlers do *not* cultivate the best lands first. They cultivate the most accessible lands. This may be true, but it does not invalidate the above demonstration, for differences in fertility between the various grades of accessible land will act in the manner above described when better lands *are* cultivated whether they are cultivated first or not. The mere *order* in which different grades of land are cultivated does not affect the theory.

Secondly, it is objected that it is not differences in fertility which causes the differences in the rents to be obtained for various areas, but their situation with regard to markets. We have anticipated this objection. Accessibility to markets is an advantage which operates in exactly the same way as fertility. Land which is one degree more favourably situated than other land will have a differential advantage that will produce exactly the same effect upon rent as a higher degree of fertility. For a disadvantageous situation is an obstacle to successful cultivation just as is inferior fertility. We have

to take all kinds of advantages together; and the rent of the land will be the difference between the net produce of the land in question and the net produce of the most disadvantageous land which could be cultivated profitably provided no rent were paid for it.

Again, it has been objected that, in most countries there is no land for which no rent is paid. The answer to this is plain. In most farms there is some land, for which, by itself the farmer could afford to pay no rent. If there are five acres of such land in a hundred-acre farm then those five acres are the no rent land. The farm, whilst nominally paying rent for one hundred acres, is really paying only for ninety-five. *The five acres contribute nothing to the rent.* Moreover, it may legitimately be pointed out that there is land of such a disadvantageous character, whether by reason of its quality or position, or what not, that the rent to be obtained for comparatively large areas of it is nominal.

It has also been said that, if Ricardo's theory is true, rents ought to have risen everywhere as population has increased; that, on the contrary, the rent of agricultural land, in England for instance, fell considerably during the last thirty years or so of the nineteenth century. The answer is that had the English people been confined to the areas from which they formerly drew agricultural products, not only would rents have risen, but the people would hardly have been able to live. The improved means of transport and the opening up of new lands in distant countries operated to increase the area from which agricultural products could be raised. Distance from the English market is no longer a considerable obstacle to the trade. Thus, new lands, many of them rich and comparatively easily cultivated, have been brought into competition with English land; *i.e.*, the *quantity* of advantageous land from which we can draw supplies has been increased, the margin of cultivation, therefore, has risen, the poorer corn lands of England have tended to go out of cultivation, and rents have fallen. This is exactly what we should expect under the Ricardian law of rent, and serves as a confirmation

of its truth. The last few years, however, have seen a rise in the price of agricultural products caused by the greatly increased demand of the United States and other countries owing to increasing population. Population has increased, in some areas, faster than new lands have been brought into cultivation; agriculture in England, therefore, is becoming more profitable, the capital value of land is rising, and we may depend upon it that, should this process continue, rents will rise too. For the additional surplus caused by the lowering of the margin of cultivation can, under competitive conditions, be taken by the owner of the land.

The reader, however, must remember that the associations of the ownership of land are special. The relations of landlord and tenant are often friendly. It is not customary to raise rents in the case of existing tenancies. It is thus far from being the case that the landlord does actually exact the whole of the economic rent of agricultural land. In some cases, however, *e.g.*, in Ireland, rack renting has not been uncommon in the past. And whether the full rent is exacted or not in actual practice, and in all individual cases, the tendency of the rent of any land to represent its differential advantages over the worst land in cultivation remains. As it becomes profitable to bring more and more disadvantageous land into cultivation, the tendency of rents is to rise. As agriculture becomes less profitable and the more disadvantageous lands tend to go out of cultivation (*i.e.*, as the margin of cultivation rises) rents tend to fall. This is the substance of the Ricardian theory of rent.

The Remuneration of Capital Sunk in Land.

It is obvious that, in old countries, a great deal of capital has been expended in improving the soil. Such capital is embodied in the soil, and some of the total produce of the land is due to capital sunk in this way. Such part of the rent as is due to this permanent investment of capital is, it is argued, interest and not rent at all. But, in the first place, it would

be difficult to distinguish the part of the rent which is due to improvements from the rest. This, by itself, would not invalidate the theory. We may analyse rent into constituent portions, even though it would be almost impracticable to sever them in practice. The real objection to considering capital, sunk by way of permanent improvements in the soil, as a part of the soil itself is that such part of the rent as is due to the improvements is determined, not in a different way from, but in the same way as, the remainder of the rent. The causes which act upon the rent which the landlord receives because of his ownership of the natural and indestructible qualities of the soil operate also to increase or diminish the rent which arises by virtue of permanent improvements. A vineyard may, and sometimes does, consist of soil which has been transported, placed in a good position on a hillside, walled up and supported so that it is hardly incorrect to consider it as being "manufactured." Some writers would consider it as being "capital" rather than "land" therefore. But its rent will be determined in the same way as that of an ordinary cornfield, according to the law of rent which we have stated. We shall see later, that there are other cases in which the return to capital may be regarded as a rent, or, at least, as analogous to rent.

The Relation of the Rent of Land to the Price of Agricultural Products.

It has been stated that *rent does not enter into the cost of production*, or, more accurately, the economic rent of agricultural land does not enter into the expenses of producing agricultural products. The real meaning of these statements is that rent does not govern price but price governs rent. At any given time in one market there is but one price. Whether corn, for instance, has been produced on the richest and otherwise most advantageous land, or on that land which it only just pays to cultivate is no concern of the buyer. For every quarter of wheat of a particular quality the same price will

be forthcoming at the same moment in the same market.[1] If there is any land, so disadvantageous that it yields no rent, then the price of wheat grown upon it must, normally be such as covers the expenses of production of the "marginal" wheat. It is these marginal expenses which must be covered by the price. If all the other producers paid no rent this would not alter the price to be obtained, provided the quantity for sale and the needs of the buyers remained the same. Hence a remission of rent by the landlord would merely benefit each tenant to the extent of his rent and not the consumer. It would have no effect upon price. Of course, as each tenant must pay his rent, he rightly considers rent to be one of *his individual* out-of-pocket expenses. But it is not any part of the expenses of production which the price must cover unless the output of agricultural produce is to diminish. Rent does not enter into *marginal* expenses; and price must conform to these. Economic Rent, in fact, is a surplus over the marginal expenses of producing agricultural goods. Some producers are in a better position than others, the surplus varies accordingly, and such surpluses form what is properly a producer's surplus or "rent," whether owner of the land or the tenant actually receives it. The student should take care to grasp this reasoning, as similar reasoning will often have to be applied in the portions of this work dealing with interest, profits, and wages.

(2) House Rents and Ground Rents.

A building is a commodity, the use of which, for a definite period, is sold to the occupier (consumer). The sum paid by the occupier and received by the owner for the use of the house for a period is called a rent. How is this rent determined? The answer is that it is determined upon the same

[1] The expression of such a tendency is sometimes called "The Law of Indifference." No one will pay more for one unit than for another of the same quality at any given moment. The particular unit purchased is a matter of indifference.

principles as the value of any other commodity. Let us suppose that there are ten precisely similar houses, then the yearly rent which must be asked, if all ten are to be let, must be such as will be paid by the prospective tenant who needs such a house least. Doubtless some tenants would pay more than this. Let us suppose that when £90 a year is asked only one house is taken, at £80 another is taken, at £70, two more, at £60 three others are occupied, and at £50 the three remaining houses are tenanted. At a higher rent than £50 the supply will be in excess of the demand; thus, if all the houses are to be let, the rent to be asked must be £50 a year; and this will be the rent of each house, since tenants will not pay £90, or £80, or £70, or £60 for houses, some of which can be obtained for £50 a year. The law of indifference applies: the fact that, where one unit of a commodity is as good as another, only a single price can prevail in the same area of competition, forbids that a group of houses, each of the same size and quality, should, for any length of time, be let at different rents. Thus the rent of houses tends to be indicated by their *marginal* utility measured in money.

Of course, if time be allowed, forces will act from the side of supply. If £50 a year is not sufficient to pay the builder the ordinary rate of profit on the capital he has invested in the house and the ordinary expenses of repair, then building will tend to diminish or even to cease. Capital will be diverted into other avenues of investment; and, if population be increasing in the neighbourhood the demand for houses will tend to outrun the supply, and rents will tend to rise, say, to £60, or whatever sum is sufficient to cover the marginal expenses of producing houses. So if £50 a year more than covers the ordinary profits of the builder together with the expenses of repairs, *and there is a plentiful supply of land* fit for building purposes, building will be vigorously undertaken, and the supply of houses will be increased. Then rents must fall in order that all houses may find tenants. In this way, *provided there is plenty of land available for building*, the supply of houses and the demand for them, will tend to be

equated at a rent which measures, of course, the marginal utility of houses, but which also measures the marginal expenses of producing them.

Ground Rents.

In many cases the annual rent of a house will be found to be greater than the annual interest, at the ordinary rate, on the capital invested in preparing the site and building the house, together with the annual cost of repairing it. The difference is the ground rent. Suppose the annual interest on the capital invested in a house[1] which fetches a rent of £50 a year, together with the cost of keeping it in repair, is £40. Then the ground rent is £10 a year, and value of the site on which the house is built is to be ascertained by finding the principal on which £10 is the interest for one year at the normal rate: in other words, by capitalising the ground rent. The site value of the area built upon is the ground rent capitalised.

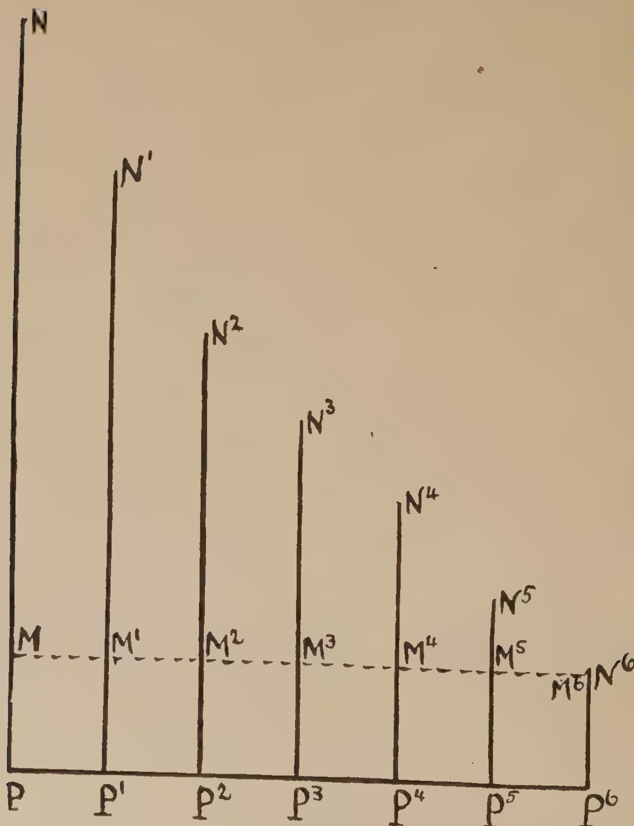
A little consideration will show that the ground rent of any site is governed by the rent to be obtained for the house, and that the house rent is not determined by the ground rent. In other words, the rent of building land is determined by the price of house accommodation, and not *vice versa*, just as the rent of agricultural land is determined by the price of agricultural products, and not the price of agricultural products by the rent of agricultural land. A builder, or, rather, the person who proposes "to develop" a particular estate, will consider what is the rent he will probably be able to get for the houses or other buildings for which the land he is dealing with is suited. The rents must be such as will give at least the ordinary return upon the capital he uses; otherwise he will not build. The excess of the rents over that return may be taken by the owner of the land as ground rent. If there is no prospect of such excess then no ground rent will be forthcoming; and the amount of the ground rent will depend upon the amount of the excess, if any. Now there may be a site

[1] Including the cost of *preparing* the site.

of so disadvantageous a character that the rent to be obtained for a building erected upon it will only just cover the interest on the capital used together with a reasonable allowance for repairs. For such a site no ground rent will be obtained. The ground rents of sites having advantages over this "no ground rent site" will tend to be the excess of the rent to be obtained for each of buildings on the sites over that on the site which yields a normal return to the builder but no rent to the landlord. There is, thus, a close parallel between the rent of building sites and the rent of agricultural land. Each depends upon the price of the commodity containing a surplus over the expenses of its production. Such a surplus forms a true "economic rent" of agricultural land, or in the case of building sites, a ground rent. We may represent the theory of ground rents by a diagram similar to that used in illustrating the Ricardian theory of the rent of agricultural land.

Let P, P^1 . . . . P^6 represent sites on which buildings of the same character are erected. Of these P is the most advantageous and P^6 is so disadvantageous that the rent to be obtained for the building erected upon it only just brings in the ordinary return on invested capital together with the annual cost of repair. Let the rents actually obtained be represented by the vertical lines PN, P^1N^1, and so forth. From PN, P^1N^1, P^2N^2 . . . . cut off PM, P^1M^1, P^2M^2 . . . ., equal to PN^6, then $M N$, M^1N^1, M^2N^2 . . . . represents the ground rent in each case; and M^6 coincides with N^6, that is, the ground rent disappears.

It will be seen, then, that the existence of a true ground rent depends upon the existence of differential advantages between sites. Where land for building is very plentiful, and one site is practically as good as another, as for instance in a scattered rural community, then the site rent to be obtained will be little more than the agricultural rent of the land, that is, in the case of a single house, almost negligible. Even if the land be worth a rent of £2 an acre a year, a very high rent for agricultural land, and a cottage is built on one-eighth of an acre, an extremely liberal allowance, the site rent



would come only to five shillings a year. The agricultural value of land is, however, often much less than £1 an acre, and cottages, not infrequently, occupy less than one-eighth of an acre. Thus site rents, and, therefore, values are of little importance outside urban or suburban communities. Similarly, where a town is decaying or overbuilt, ground rents may disappear. Buildings may let for less than the current interest on the capital invested in the buildings alone together with the cost of repairs. In such a case obviously the house

rent contains no ground rent and the capital value of the unimproved site is nothing.

Thus ground rents are an urban product. They will be highest where land is most urgently needed. They will be largest in the places where the differences between the suitability of sites for urban uses is greatest. They are, as a rule, unimportant in rural communities, and they tend to diminish or to disappear in decaying towns. The reader should carefully remember that their existence does not increase the rents of houses, since it is the house rent which governs the ground rent, and not *vice versâ*. Their remission by the present takers of such rents, therefore, would do nothing to lower the rental of the houses, but would merely alter the destination of that part of the total rental which consists of ground rent.

CHAPTER V

CAPITAL AND INTEREST

CAPITAL, in the broadest sense, may be defined as consisting of those kinds of wealth other than land from which income is expected. The old definition by which capital was described as being " wealth saved, and devoted to the production of further wealth," *i.e.*, wealth which was being used reproductively, was defective inasmuch as it would have excluded much wealth which is " capital " from the point of the individual owner. Any man, for instance, who owns government stock regards that stock as part of his capital ; and the same view is taken by the tax collector. And, inasmuch as income is derived from it by the individual, it must properly be so regarded, if we are to give that word its widest meaning. Very often, however, such wealth is not being used, and has never been used for the production of further wealth. On the contrary, much of such " capital " has been used during wars, for the destruction of wealth, as well as of life.

There is a necessity, therefore, for us to distinguish different kinds of capital. Wealth may yield an income to an individual, whilst from the point of view of the community as a whole, it is being absolutely wasted ; *e.g.*, as Professor Sidgwick has remarked, money lent by a usurer to a spendthrift. In considering the *distribution* of wealth, therefore, we have to consider all wealth from which an income is derived as capital. But much of such capital will not be of any assistance in the work of producing wealth. And the national debt of a country, unless it has been spent on productive enterprises, is capital from the point of the individual stockholder, but is, from the national point of view, a mere burdensome debt, the interest on which is a charge upon productive industry and commerce.

Thus we may define *Social or National Capital*, as all those

forms of wealth, whether the property of individuals or of political or other bodies, which are being used, or are available for use, in assisting production. *Individual Capital* will be those forms of wealth from which individuals derive, or expect to derive, an income. *Trade Capital* will consist of those forms of wealth used for acquisition in industry or commerce.

Thus the holdings of an individual in consols will be Individual Capital, but not necessarily Social or National Capital. Similarly when we speak of the capital of a railway company being ninety million pounds, we must remember that this is really the debt owing by the company to its shareholders. The real capital of the company consists of those instruments of industry, its permanent way, buildings, rolling-stock, and so forth, into which the individual capital of the shareholders has been converted.

The distinction commonly made between *Fixed* and *Circulating Capital* is, it must be remembered, one of degree rather than kind Circulating capital is that capital which is consumed in a single use. The result of the single use, therefore, must be both the replacement of the original capital and the creation of enough further wealth to make that use profitable. But the fixed capital, capital which exists in the more durable forms, must also so be used as to replace itself, or its own value, in its lifetime and earn the usual rate of profit during the whole period of its use too. The distinction, therefore, is one of degree rather than kind.

The distinction between *Consumption* and *Auxiliary* capital is a different one. Consumption capital is a form of circulating capital. It is that used directly in supporting those who work, *i.e.*, it consists of those forms of capital which are, or are converted into, goods consumed directly by the labourer. It will consist, therefore, to put the matter in terms of money, mainly in the wages and salaries paid out in course of business. Reflection on this point will show the reader how the same wealth may go by different names according to our temporary point of view; for we have already shown (p. 25) that such wages and salaries are part

of the *products* of industry, whilst they are the *incomes* of the worker. Reflection will also convince the reader that capital, and especially those forms of capital which are used as consumption capital, are being created and added to continuously. Wages are not paid out of any fixed fund of capital but out of the current product of the industry. This product must, from the point of view of the payer, be regarded as circulating capital; but it is capital which is being continuously saved, which increases as the efficiency of the labourer increases, which therefore can provide higher wages proportional to that increase of efficiency. *Auxiliary capital* on the other hand consists, not of what goes to the workers for consumption, but of what they work upon or with; the things auxiliary to their labour: materials, tools, and implements, machinery, buildings.

Loanable Capital, as the term itself indicates, is capital which exists in such forms as can be lent. Of course it is possible to lend almost any form of capital, a railway or a bridge could be lent, and still more easily, coal or meat, or grain. But the most easily loanable form of capital is money, or, rather, credit. And, to-day, the most usual form of loanable capital consists of bank balances, which can be lent either by their owners, or by the banks entrusted with those balances.

Capital is the result of abstinence from consumption. Obviously, if a man uses the wealth which he possesses for consumption, he cannot expect to derive an income either by using it himself or by lending it to others. In the sense, therefore, that capital is the product of abstinence from consumption, all capital is saved. But the use of the word "saving" suggests conscious and sometimes painful abstinence. No doubt much capital is the result of deliberate saving which costs a considerable effort. Most wage-earning class and middle-class saving is of this kind. But much capital arises from the almost, or quite automatic saving of the wealthy, or the well-to-do, who "spend" freely as much as their tastes and habits incline them to spend, and who

invest their surplus income. It is thus better to think of saving as a process of non-consumption.

Obviously as the scale of industry and the magnitude of industrial enterprises increase the importance of capital increases. Under primitive conditions, certainly when people have settled down to agriculture, the principal forms of capital will be a few rude tools and implements, and seed. A man must labour to make a plough which he does not intend immediately to consume. As, in the time taken to produce the plough, he might have produced something immediately consumable, and have consumed it, his devotion of labour to the production of the plough for future use involves abstinence from consumption, *i.e.*, saving. Similarly, in order to have seed for the next sowing he abstains from consuming a certain part of his crop. Here we see the saving of capital visibly taking the form of the creation or retention of commodities for some future use as instruments of production. Social capital has been accumulated, and the productive capacity of the social unit increased. In our time and in most civilised countries saving takes another form. Capital is accumulated in the form of some generally acceptable medium of exchange. Workmen of all kinds received their wages in coin. Such portions of their wages as they save may be hoarded up for future use. But this process is now very rare. As a rule, the wage-earners will deposit their spare funds in a savings bank, or with some friendly or building society, or with a trade union. What happens, therefore, is that money, which might immediately have been exchanged into finished goods, which, in turn, would immediately be consumed, has been deposited by its owners with other people. The workmen have become the creditors of the savings bank or the friendly society. These depositaries are, of course, the debtors of the depositors; and goods which might have been consumed have not been consumed, *i.e.*, they have been "saved." But outside the wage-earning class incomes are received in the form of credit instruments, chiefly cheques drawn upon banks. The person receiving income receives a

piece of paper on which the payer orders the bank to pay the payee, let us say, £50. In other words, the bank is now indebted to one person instead of another, or, as we say, credit to the amount of £50 has been transferred from payer to payee. The payee now having £50 more to his credit than before can either use the whole of this credit in order to obtain goods for immediate consumption, or he can leave all or part of it as a debt owing by his banker to him. In this case, and to the extent that he leaves the credit untouched, he saves. If he does not need to use this credit in order to obtain goods for immediate consumption, he can "lend" it to those by whom credit is wanted now. He can transfer a present credit to a friend, or he can transfer it to some new business enterprise, usually by buying shares in a company. And if he does not advance this capital for a definite or indefinite period the bank probably will. For the banker knows from experience that, whatever may be the extent of his indebtedness to his creditors, that is his depositors, only a certain proportion of his indebtedness will come up for liquidation on any given day. Thus he can safely lend the rest.

The causes, therefore, which favour the accumulation of capital are: (1) The existence of settled and civilised society in which people have acquired the habit of looking forward and of desiring future as well as immediate gratifications. (2) A stable government rendering accumulations safe. (3) A population with a high productive capacity in order that there may be wealth, in excess of immediate demands, to save. (4) The development, by the State, or through private enterprise, of machinery for making saving easy.

We know that interest is the payment made for the use of capital advanced. But we must bear firmly in mind that, as a rule, the capital really advanced consists of goods and goods only. We have already noted that, under primitive conditions, there is no difficulty in seeing that the capital accumulated, and, therefore, the capital advanced, consists of goods, and not merely of some particular form of goods commonly used as a medium of exchange and called money.

And we have seen, too, that, in a highly developed country, the saving of credit involves a foregoing of consumption by the saver, and that, though the usual "form" of saving is the abstention from a use of credit, that abstention involves the "saving" or non-consumption of goods. Obviously, therefore, whatever *form* an advance of capital takes that advance must result in the borrower being placed in possession of goods which he wants to use and could not obtain unless he borrowed. An advance of capital does not usually even take the form of the advance of metallic money, and, whether it does or not, the essential lending must be a lending of goods.

As the Dutch economist, Pierson, has pointed out, the simplest case of an advance of capital is that of a sale on credit. A spinner, for instance, sells yarn to a weaver and is paid by a bill due three months hence. Here the spinner has actually lent existing goods for three months, and the goods have been borrowed by the weaver in order that he may use them in the production of cotton cloth. No money has passed, and the spinner is not entitled to receive the money for which the goods have been sold for three months after the date of sale. If he were paid at once he would receive the equivalent in value of his yarn, in money, or something worth money; and this he would be able to convert into goods for consumption at once. But the spinner in such a case will charge a higher price on this sale for credit than he would on a sale for cash. The difference is the charge which he makes for the loan of the yarn. It is the interest on the loan. In some cases, where, by the custom of the trade, or for other reasons, goods are sold for credit and paid for by bills at three months, the seller may not wish to make the advance himself. In such a case he sells and delivers the goods, and receives his bill at three months or forty days. But he immediately sells this document for its present value in cash, or, in the current phrase, he gets the bill discounted. The person to whom the bill is sold (*i.e.*, the person by whom the bill is discounted) in such a case, deducts from the amount due three months or

forty days hence, the simple interest for three months or forty days at the current rate of interest. Thus the advance of capital again takes the form of a delivery of goods now, to be paid for at a subsequent date, and the only difference is that the producer of the goods, being unwilling to lend, has taken advantage of existing financial machinery to substitute for himself someone who is not only willing to lend, but whose business it is to do so.

In many trades, however, cash dealing is the custom, and this is becoming increasingly the case, Business men, especially in England, are tending more and more to sell for cash only. That is to say, they insist on being either paid in actual coin, or as is almost universally the case, by a cheque or bill which is immediately payable, which, therefore, they can convert into coin as soon as they like. As a matter of fact, they very seldom present such documents for exchange into coin, but they use them to increase their credit at their bank. How then is the buyer, who cannot pay in cash, to buy ? Let us suppose that the buyer knows very well that at s me future time, at the end of a month, or three months, or forty days, he will either have resold at a profit the goods he wishes to buy on credit, or he can use the goods in manufacture or in some other way so as to produce a profit. In all probability he has had dealings with bankers who know his situation and what he can do. They advance him money ; that is to say, they credit him in their books with an advance. He then buys the goods with a cheque drawn upon the banker who has advanced "money" to him, sending the cheque, of course, to the seller. The seller (who we will suppose banks at the same institution) pays in the cheque to his own credit. Thus the buyer is debited and the seller credited with the same document, possibly within a few hours. The whole affair is, through the bank machinery, accomplished by a mere book-keeping transaction ; and the interest which the banker charges for the advance, though really the interest upon a loan, which, in essence, is a loan of goods, may also be considered as the remuneration of the bank for its services

in making the necessary arrangements for providing credit where credit was needed. If the two men bank at different institutions, then the cheque which was drawn by the buyer upon bank A is paid in by the seller to bank B, and the seller is at once credited with its value; bank B presents it to bank A, which either transfers credit to that amount to bank B or reduces any existing debit of bank B to bank A by the amount of the cheque. The only difference is that the book-keeping is one degree more complicated. Incidentally here we may note that the work of the bank is to enable credit to be used as currency: to enable the sellers of goods to take credit for the goods they have sold, and to furnish buyers with credit which they need, credit thus being used as a currency.[1] The result of this is to take goods off the hands of those who have created them and place them in the hands of those who wish to use them. Thus both exchange and production are facilitated.

We now see that advances of capital, as they occur in ordinary business, consist essentially in the advance of goods, the agency by which the lenders of the goods are able to find the borrowers who want *their* goods and no others, and the borrowers are enabled to find the goods they require, being credit. Goods are, as it were, turned into credit, advances are made in terms of credit, and, with these advances, the particular goods required by the borrowers are purchased, a debit being thus created against the borrowers, who pay for the accommodation they receive, and wipe out the debit in due course. Of course if the loan is a permanent one, such as an advance consisting of the purchase of shares in an industrial business, then the debit is never wiped out, or is only wiped out when the business is brought to an end. Here the lender is entitled to dividends on his shares, and can get his debt repaid by selling his shares, *i.e.*, by transferring his credit

[1] Currency simply means anything which is commonly used in any given state for effecting purchases. Thus, in England, standard gold coins, silver and copper coins, bills of exchange, bank notes and cheques are all currency. And the most important form of currency is the cheque.

with the industrial concern (say a railway company) to some other person. The reader should carefully realise, however, that whether capital is advanced on a bill at three months, or whether the investment is a permanent one in which capital is borrowed for an indefinite period, it is goods that are advanced. Let us suppose that a great railway company wishes to build a branch line. It raises the capital (*i.e.*, *borrows* it) by issuing £2,000,000 worth of shares. The buyers of these shares are the lenders of the capital. They draw cheques on their bankers in favour of the company or its bankers. That is to say, their purchase of shares merely involves the transfer of credit from a number of banking accounts to a single banking account. The company, now having £2,000,000 (or more, or less, according as the shares were issued at above or below par) standing to its credit, uses this sum for the purchase of machinery, implements, materials, steel rails, sleepers, girders, or for the payment of labourers. They do this either by themselves or through contractors; but every payment made means that actual goods have been advanced to the company, the only *money* advanced being the coins in which wages are paid. Even these coins, however, are, as a rule, immediately transformed into consumable goods. Thus the original advance of £2,000,000 means an advance, by the aid of credit machinery, of all those things necessary for the construction of the line including the subsistence of those engaged in constructing it.

Now we are in a position to see, first that the capital *must be saved*, that is, goods or the wherewithal to purchase them must be accumulated; and that capital *must be spent*; that is, either the actual goods accumulated must be used, and indeed consumed,[1] or the purchasing power accumulated must be exercised, in the purchase of goods for such use. This is what is meant by saying "all capital must be saved; all capital must be spent."

Similarly we can now see what are the services rendered by capital, which make it worth while to pay interest. We

[1] That is used up, so that they cannot again be used.

see the origin of interest. The use of capital enables those who are engaged in production to enjoy goods whilst the income they are earning is in an unrealisable form because the goods they are producing are in an unfinished condition. Those who are engaged in industry, the results of which are not immediately realisable, can only conduct their business if they possess capital or if they borrow it. Take the case of the branch line we have pictured as under construction. Here the advance of capital enables those, who are daily producing something, but something which, until it is completed, cannot be either sold or used, to be paid for their services periodically. The shareholders (the true capitalists) advance to the railway company, the company pay out of this advance the sums due periodically to the contractor, who, in turn, pays the men and purchases material. Thus, goods which are none the less goods because they are incomplete, or as it has been put, "unripe," are exchange for finished or "ripe" goods, ready for immediate consumption.

It is wrong, therefore, to speak of the capitalist as supporting the worker, furnishing him with food, clothing, shelter, and the other goods he consumes, whilst he produces. The labourer is not supported by others. He supports himself by what he produces. But through the intervention of capital he is enabled to exchange unfinished and incomplete goods for those finished goods which he requires. It is this superiority in value of finished goods over goods which *will be* finished, of present goods over future goods which gives rise to the phenomenon of interest and causes interest to be paid.[1]

[1] The reader will find it useful to bear in mind that the labourer usually advances his labour to the employer. It is customary for work to be paid for *after*, not before it is done. A man entering the service of a firm at weekly wages is only paid at the end of the week, sometimes indeed, only at the end of a fortnight, as it is customary to keep a week's wages in hand. Other workers advance their services or, better, the product of their services, for as much as a month or a quarter at a time.

The Rate of Interest.

It is best to consider interest as the price of a commodity, the commodity being the use of capital for a definite period, say a year. The use of capital is paid for because capital has utility, the general character of which has just been described, and because the supply of capital is not, at any given time, equal to what the demand for it would be if its use could be obtained without charge.

The law which governs the rate of interest, *i.e.*, the price at which an advance of capital will be made [1] will, therefore, be governed by the relation between the existing supply of loanable capital and the demand for it. Any given quantity of capital can get itself used at a price, and the larger the quantity of capital available for loan the lower the rate at which it must be offered if it is all to be used. Thus, the quantity of loanable capital being what it is, the rate at which it will be lent will always be indicated by the rate at which that capital which is needed least must be offered. In other words, the rate of interest is indicated by the marginal utility of capital. The rate of interest therefore is determined in the same way as the market value of any other commodity. The reader must again be warned against supposing that the rate of interest is *governed* or *determined* by the marginal utility of capital. The rate of interest, like the value of any other commodity, is the product of an immense complication of forces. All the causes which make the supply of capital what it is at any given moment, and those which make the demand for capital what it is, and therefore govern, on the one side the amount of capital available for loan, and, on the other, the urgency of the uses to which it can be put, determine what the marginal utility of capital at any given moment is. The value of the marginal unit indicates the value of each unit. If the supply of capital increases whilst the demand for it remains constant, the rate at which it is offered for loan will have to be lowered ; the

[1] When a City man talks about the " value of money " he means the rate of interest. In fact, by " money " he means credit.

margin will descend. If the urgency of the uses of capital increases whilst the quantity remains the same, then the utility of the least needed portion increases and a higher rate becomes obtainable for the whole supply. There is a new margin at which supply and demand are equated. And wherever the margin may be the measure of the utility of that capital which can only just be profitably used, will indicate the value of the whole supply. The value of the whole supply will be equal to that of the least needed and not to that of the most needed portion.

But an ordinary commodity, corn, or cloth, or boots of a particular make, has its normal value, which, as we have seen, during any period of time sufficiently long to enable ordinary economic forces to work, tends to be equal to the ordinary expenses of its production. Thus, as we say, the normal value of a commodity will tend to be fixed at the point where marginal utility measured in money, and marginal expenses, coincide.

The question we have now to settle is, whether there is in anything like a normal rate of interest. To answer this question we have to ask ourselves (*a*) What are the expenses of producing capital? (*b*) Does capital conform both to the law of demand and the law of supply?

(*a*) The real cost of producing capital is the effort of abstinence from consumption, or *waiting*. And the expenses of producing capital may be taken as the estimated value in money of this waiting. Let us suppose a man has £100, or wealth to the value of £100, then if he is willing to forego the consumption of his wealth for twelve months, provided he can obtain £105 at the end of that time, the expenses of producing the use of £100 capital for that period is £5. In other words, the cost of producing capital depends upon the rate at which those who have the present command of wealth discount benefits which are realisable only in the future. Thus, we may argue that, just as the producer of goods must, during any normal period of time, be able to obtain for those goods the expenses of their production including his own

"profit" or other remuneration, so the saver, the person who accumulates capital, must have a compensation for the trouble of saving, or deferring consumption, otherwise he will not save. The normal rate of interest, therefore, must be sufficient to induce the most unwilling saver to prefer a future to a present enjoyment of his goods. The normal rate of interest, therefore, is not only a demand price equal to the marginal utility of capital, but it is also a supply price equal to the marginal expenses of producing capital, *i.e.*, saving or abstaining from consuming, or deferring consumption. If such an analysis be true, then the accumulation of wealth available for use as capital will, the habits, and customs, the outlook and the prudence of the people remaining the same, vary according as the rate of interest to be expected varies. When the rate is high, then saving will proceed rapidly, when the rate falls saving will diminish.

But is this analysis correct? In the first place, we have to note that most saving in highly civilised countries is the saving of the rich or the well-to-do. Do changes in the rate of interest affect their willingness to save. It may be doubted. In general, it is not untrue to say that the amount of their saving is not much affected by the current rate of interest. Did the rich man save less during the decade 1890-1900 when the rate of interest was lower, than in the decade 1900-1910 when it was higher? The truth probably is that, whether he did or did not, his saving was the mere overplus of his income above expenditure which he did not consciously curtail. He spent what satisfied him and saved the rest. And the amount that he saved was unaffected by his knowledge that capital was earning more in one period than another.

On the other hand, we have to remember that though a rise in the rate of interest does not affect the willingness of the rich to save, it does affect their capacity so to do. The higher the rate of interest the higher their incomes from invested capital and, therefore, the larger their surplus of income above expenditure is likely to be.

To come to the savings of the middle and the prosperous

wage-earning class, do they save more if the rate of interest rises? In this case savings come mainly out of earnings, and not out of the products of investment. Thus, in general, a rise in the rate of interest does not greatly affect their capacity to save. Does the workman who saves through a friendly society, an industrial assurance society, a trade union or the Post Office Savings Bank save more if the rate of interest is high. Again, it may very much be doubted. If he is saving to purchase some particular benefit, such as £100 payable to his family on his death, or a sick allowance or the like, then the lower the rate of interest the higher must be his periodical contributions. That is, a fall and not a rise in the rate of interest is likely to increase his savings. And this applies to the professional, commercial, and middle-class saver with even greater force. If a man is saving so as to be able to retire on a fixed income, to be able to provide for the education of children or for their start in business or professional life, then, as Sir Josiah Child and others long ago remarked, a low rate of interest must mean a greater saving. Thus we may conclude that the rate of interest is not the only or the chief inducement to saving. The law of supply cannot, with certainty, be said to act in the matter of saving. A higher rate of interest does not necessarily result in more saving, and it may result in less. The forces acting from the supply side in the production of loanable capital are not on all fours with those acting on the supply of goods in general. In short, men are willing to bear the "cost" of deferring consumption from purely prudential motives and from motives of family affection. Increase prudence and foresight and family affection, and saving will increase irrespective of rises and falls in the rate of interest.

Our general conclusion, therefore, must be that the law of supply does not apply with any certainty to capital, that we cannot depend upon a rise in the price to be obtained for the use of capital (*i.e.*, in the rate of interest) to increase the quantity of capital "saved." Nor can we predict with any certainty that a fall in the rate of interest will diminish the

rate of saving, because abstinence from consumption, waiting to enjoy the use of wealth, does not wholly or even chiefly depend upon the *quantity* of the *added* benefit to be obtained when the period of abstinence or waiting comes to an end.

But the reader must carefully remember that changes in the rate of interest will affect the direction of investment. A rise in the rate of interest in one country will attract capital to that country. A rise in the rate of interest to be obtained by depositors in banks will induce people to leave money on deposit rather than place it in permanent investments, and will therefore tend to increase the amount of immediately loanable capital, and thus, in turn, to cause a fall in the rate of interest on immediately loanable capital. It may be said, too, that a rise in the rate of interest paid for loanable capital may not, perhaps, induce saving, but will induce lending. It will operate to prevent some people who would merely have hoarded at lower rates to deposit their wealth with institutions whose business it is to lend. No doubt this would be so, if hoarding went on in civilised countries to any appreciable extent. But it does not. Nearly all accumulated wealth, not yet permanently invested, is deposited where it can be used, and there is little or nothing to show that a general fall in the rate of interest would result in money being withdrawn from banks and hoarded. Accumulated capital which has been permanently invested, cannot, of course, be withdrawn.

Finally, it must be remarked that interest, properly speaking, can only be applied to the payments made for the use of recently accumulated capital, and to the payments made in respect of the use of circulating capital. The payments made in respect of the use of capital permanently sunk in some fixed form are more properly regarded as analogous to rent rather than interest. The supply of such capital can only slowly be increased. When it was first invested no doubt the particular form of investment was decided upon because the rate of remuneration expected was sufficient. But such capital cannot easily be withdrawn from such uses, should the

rate of remuneration fall. Nor if the rate of remuneration rises is the amount of capital so invested always increased. Thus there is nothing to keep its remuneration at any normal level. Its owners may enjoy profits far above the existing normal rate, or above the expectations of the original investors. Or the profits may sink far below the normal or below those expectations. The quantity of such capital is, therefore, to all intents and purposes limited, and its remuneration is the surplus, if any, which is left after the expenses of producing a commodity have been met.[1] Interest, in such cases, is analogous to rent.

[1] Consider the case of capital sunk in a great railway fifty years ago. The remuneration payable upon such capital is not due to the efforts of the present owners of their capital or to their "waiting." The present expenses of maintenance and working must be met, and the dividend consists in what (if anything) remains over. The present income, therefore, is almost entirely parallel to that of the economic rent of agricultural land or to a true ground rent.

CHAPTER VI

PROFITS

THE term profits is ambiguous. It would, without hesitation, so we are told,[1] be applied (*a*) to the total gain of an individual capitalist employing none but his own capital, and personally performing all the labour of management; (such a profit as this is often termed *gross interest*); (*b*) to the gains of a joint-stock company or a private firm in the case of which all labour of management is paid for by fixed salaries; (*c*) to the net gain of an entrepreneur who employs no capital of his own.

If we analyse these three uses of the word profits we see that in the first case profits includes (1) pure or net interest on capital, that is the interest which would be expected by one who placed his money in a perfectly safe investment and had no trouble in managing that investment once it was made; (2) a return proportionate to the risks of the investment; (3) the earnings of a managing ability; (4) any surplus accruing by reason of the differential advantages enjoyed by the business. In the second case, earnings of management are excluded, but compensation for risk, net interest, and surplus are included. In the third case, net interest and some payment for risk are excluded, and the profit consists entirely of earnings of management, together, probably, with something which can be termed entrepreneur's surplus.

Thus, we cannot consider, as a single topic, the determination of "profits." We must consider separately the problems arising out of its components, net interest, remuneration for risk, and remuneration for the labour of management, with the "rent" or "surplus" of business advantages.

With the first of these elements, net interest, we have already dealt. Any person trading with his own capital will

[1] *Dictionary of Political Economy*, edited by Palgrave.

expect a return higher than the bare interest which he could obtain by lending his money upon a safe security. The "profit" therefore consists of interest and something more. It is the nature of this overplus of the return above the bare rate of interest that we have to investigate. The overplus, as we have seen, consists of two, or, more often, three distinguishable elements, compensation for, or, as it is sometimes put, insurance against risk, the remuneration (or wages) of management, and some return accruing on account of the advantages of a particular business over the least fortunately situated businesses of the same kind.

This overplus of the gross interest over net interest except for compensation against risk is received, as a rule, by what is called the entrepreneur class. They are the people whom Adam Smith called the "undertakers" of industrial and commercial enterprise. They are those, to use the common phrase, who "run" businesses, and their activities are to be seen in every grade of industry and commerce from street newspaper selling, or hawking, or shoe-blacking, or cab-driving up to the organisation and conduct of great railroads or banks, or trading companies. They are *not* employés but, nearly always, employers. It may be that they employ only themselves, or their employés may be counted by the thousand.

Such entrepreneurs undertake some of the risks of businesses, and, in some cases, they not only originate, and adventure, but they manage. In such a case they expect, and in the normal case must get, a remuneration equivalent to the risks run. The more speculative, uncertain, or hazardous the nature of the enterprise the higher the remuneration of the kind which the entrepreneur anticipates if the business should be successful. Otherwise, it is argued, such businesses will not be undertaken. But it must be remembered that, under modern conditions, as a good deal of business, whether organised in the form of a company or not, is carried on by one set of people with capital furnished by another set, a great deal of the risk is run by those who advance the capital.

Thus payment for risk is often an element in dividend received by investors rather than in profits received by entrepreneurs. Or we may say, if we like, that in such cases investors are entrepreneurs. It is this which accounts, to some extent, though by no means completely, for differences in the receipts per cent. of those who merely advance capital and do no part of the actual work either of initiating, organising or conducting business. The facilities for obtaining capital are now so great, the number of people seeking new avenues for investment so numerous, the tendency of mankind to take optimistic views is so marked, that, probably, payment for risk is comparatively small, and most of it goes not to the entrepreneur, as such, but to him and to others in their capacity as *lenders* rather than users of capital.

Further we have to remember that people like to undertake responsibilities and to be their own masters. Pierson[1] argues that the entrepreneur of the humbler sort, a hawker for instance, will not undertake the anxieties, the chances, and the trouble of managing a business himself unless he earns more by so doing than he would as an employé, that, therefore, if wages rise in those occupations where it is still a fairly ordinary event for a workman to set up for himself, the number of wage-earners will increase and the number of "independent" entrepreneurs diminish. But it is by no means certain that this would be the case, for large numbers of men prefer liberty of action, prefer to rule their own comings and goings, or to think that they do, and dislike the discipline, the punctuality, and the general regularity which characterise most wage-earning employments. The contention is that even the humblest "entrepreneur" must receive more than a wage-earner in the case where interchange is possible. But the whole argument rests upon the assumption that men prefer a small financial advantage to liberty, and this is very far from being proved. As a rule, the "small master" becomes a wage-earner not because of better pay, but because

[1] A Dutch economist of authority. See his *Principles of Economics*, pp. 237 *seq.*

he is pressed out by the large business. Even Pierson, however, admits that this class of compensation for risk is probably very small. And as in big enterprises it is rather shareholders, and capitalists who get the compensation for risk than the entrepreneurs, it is best to admit that this element in the profits of the entrepreneur is perhaps small, and to regard it, where present at all, as a portion of the surplus or quasi-rent, which, as we shall see, often enters into the remuneration of the bold and sagacious, or the fortunate, or, in some cases, the unscrupulous entrepreneur.

We pass, therefore, to the earnings of managing ability. These are really, as the very term earnings implies, merely a particular variety of wages. To the determination of such earnings the general laws of value which we have already considered will apply. We may regard managing ability as a commodity. The larger the quantity of it, the lower the price at which, other things remaining equal, it must be offered in order to get itself disposed of. And the value of each unit of the same quality in the whole supply will tend to be equal to that of the unit which is least needed : that is to say, the value of managing ability will always tend to be indicated by its marginal utility.

The causes which will affect the position of this margin will, of course, be many and complicated. Anything which tends to increase the supply of such ability, as, for instance, a rise in the general level of education, or a diminution of the cost of that education, which, in spite of instances to the contrary, is generally necessary to success in managing affairs, will tend to lower the rate at which managing ability must offer itself. On the other hand, anything which increases the demand for managing ability will tend to increase the marginal utility of that ability and thus its price. A rapid increase in the numbers of the wage-earning class, an increase in the supply of capital, an increase in the number of avenues open for the employment of capital and labour, as, for instance, the opening up of new lands for development, the development of transport facilities so as to widen at once the sources

of the supply of raw material and the markets for finished goods, new inventions, in fact everything which leads to an increase in the supply of labour, of capital, and of the ends towards which the employment of both may be directed, will increase the demand for the services of those who can originate, organise, and direct.

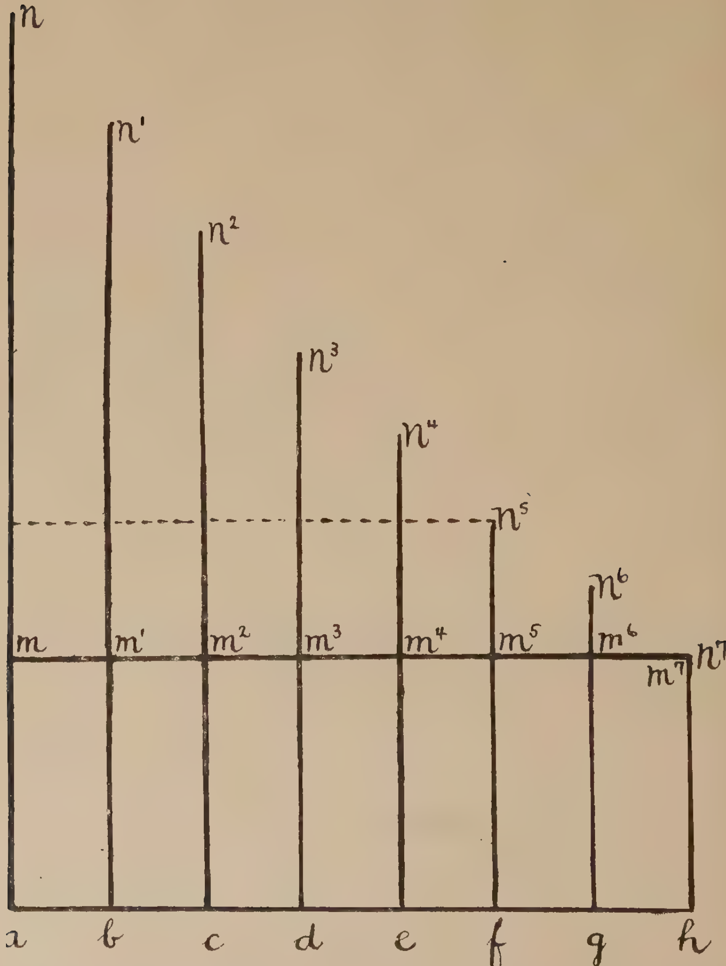
Perhaps here it had better be remarked that all these developments, as a rule, take place concurrently. The accumulation of capital in an old and settled country may sometimes take place without any commensurate increase in the productive uses to which it may be put. Possibly this was the case in England during the period between about 1880-1896. But, as a rule, such accumulations, and the low rates at which capital can be obtained, will stimulate men to seek new avenues for the employment of capital and labour. These, when found, will result in a continuously increasing production of wealth and therefore in further accumulation. The demand for business ability, as well as for labour, will be stimulated; the reward of both will be increased, and this in itself will render them at once more expensive and more productive. It is a development of this interacting and reacting kind which has been in progress since the middle of the eighteenth century.

We now come to the element in profits which has more than anything else to do with the inequalities to be seen in the proceeds of similar businesses. Why is it that the dividends of some businesses are very high, some comparatively low, and that variations of all kinds in the rate of profit are visible? Here we are speaking of the annual profit made by a business and not of the profit made on the sale of each article, that is, the profit on the turnover. In some trades the profit on each article is large, as for instance in the case of drugs or jewellery; on articles of daily consumption, however, where sales proceed almost continuously the profit on each unit sold is likely to be small. A small profit on the turnover may be, and often is, consistent with a large annual profit, and *vice versâ*. Indeed, the profit on the turnover has no

necessary relation to the annual profit of a business. But the largest variations in the *annual* rate of profit exist.

It is sometimes said that one cause of this is the difficulty of knowing what profits are. A prosperous tradesman, alive to the possibilities of competition, does not flaunt his abnormal prosperity in the face of his fellows. A tradesman whose profits are declining does not usually inform the public of his unstable position. But though such lack of information as this may make the laws of value work with some friction, yet it can only temporarily impede their action. The fact of abnormal prosperity cannot be indefinitely concealed, the fact that a business is struggling for existence sooner or later becomes known. Moreover most businesses of any size now tend to take the form of companies. Companies publish balance sheets, and here the facts as to profit soon become public property, or at any rate the property of those whose knowledge is important.

The reason for the inequalities in the profits of businesses is to be found in the fact that the product of every business which is permanently to be kept going must provide for all the necessary expenses of the business: it must meet the cost of raw materials, the wages of the labourers, the net interest upon the capital used, and, if we like to include them amongst the expenses of production, the ordinary compensation against risk, as well as the minimum remuneration without which managing ability of the various grades required will not be forthcoming. The results of the business which is least prosperous must provide all these things if the business is to be continued. But this is the *marginal business*. If its "profits" were lower than they were it would not be carried on. Other businesses have advantages over the marginal business. These advantages may arise from all sorts of causes. They may be due to a long-established connection, to the ample supply of capital which enables the business always to be early in the adoption of new and more economical methods of production, to advantages of situation either with regard to facilities for



obtaining raw materials, facilities for transport, or to the personal superiority of the managers or the staff. It follows that such businesses will furnish a surplus over the minimum of expenses, and that part of the profits which consist in such

a surplus is analogous to the economic rent of land. It has been called the producers' surplus, or a *quasi-rent.*

Thus, if a is the business which enjoys the greatest advantage and h is that in which the proceeds only just remunerate, at the necessary minimum rate, the capital and the various kinds of labour required, and we represent these proceeds by the vertical line $h\ m^7$, a remuneration equal to $h\ m^7$ will be sufficient to make it worth while for each of the businesses $a, b \ldots . g$ to be carried on. If the actual proceeds of each business, therefore, be represented by $a\ n,\ b\ n^1 \ldots .\ g\ n^6$ and the line $m\ m^6$ be drawn parallel to $a\ h$, then the portions of the vertical lines cut off by $m\ n^6$, viz., $m\ n,\ m^1\ n^1 \ldots .$ $m^6\ n^6$ will represent that part of the total proceeds of each business which is in the nature of a rent. It is a surplus above the ordinary remuneration, which is necessary if a business is to be carried on; it is, therefore, appropriately termed a *producer's surplus*, and, because of its resemblance to the economic rent of land, a *quasi-rent.* When it is due to the superior ability of the persons engaged in managing the business it has been called the *rent of ability.*

We have chosen to consider this subject of the quasi-rents under the heading of profits. If we chose to use profits in the third of the fashions described at the beginning of this section, then such a rent will form part of the remuneration of each of those entrepreneurs who take more than the minimum remuneration of their class. But, sometimes, especially under present-day conditions, it will go to the owners of the business rather than those who conduct the business, to the shareholders, and especially to the original shareholders in more than ordinarily successful businesses. Perhaps, however, it is more often than not divided between the entrepreneur (or managing) class and the original shareholders or their successors. For the entrepreneur often owns many of the original shares in a business; and those who buy shares after the business is developed and prosperous get little more than the ordinary rate of net interest on industrial capital; for the superior profit-earning capacity of the business is taken

account of in the price of the shares; the interest is a matter, not of nominal dividend, but of yield at the price given.[1] Again, where the entrepreneur or manager is, nominally at any rate, an employé, such as the manager of a railway company or a great bank, he may take a share of the surplus in the form of an unusually large salary, a salary, by the way, which may, though large, be much less than his real financial worth.[2] Thus we see that the producer's surplus may be distributed among those who merely own capital; it may form part of the "earnings of management." More usually, it will enter into both. It may be the reward of economic foresight. It may accrue to persons who are merely the sons of their fathers or the legatees of a legator.

Such surpluses are called *quasi-rents* because there is this difference between them and the economic rent of land: they are more liable to destruction because the businesses which yield them are liable to competition. If the demand for land, whether for agricultural purposes or for building sites, increases rents are bound to rise. As population increases, therefore, the best land is bound to increase in value, for it is limited in extent and cannot be increased in quantity,[3] But this is not inevitably the case with the most fortunately circumstanced businesses. There is nothing which inevitably limits the amount of capital and labour which can be placed

[1] *i.e.*, To use the slang of business, they did not "come in on the ground floor."

[2] Thus, the writer believes there is an authentic instance of a man entering the service of a financial house at a salary of £50,000 a year. Suppose, however, he caused the net yield of the business to be £100,000 a year more than before his joining it, obviously from the purely financial standpoint he was "worth" a higher salary. Some men, indeed, are, if their worth be estimated in pounds sterling, ridiculously underpaid. Thus, an admiral whose pay was a few thousands a year is reputed to have saved the country about three millions in a single year.

[3] Of course, improvement in means of communication can bring land situated in distant parts of the world, in other parts of a given country, or further away from great towns, into competition with the "best" land, whether agricultural or urban, and thus defer the rise of rents.

in competition with them. If it is known that certain businesses, or lines of business, are more than ordinarily profitable, competition will spring up, new capital and managing ability will be drafted into the production of the commodity the manufacture or sale of which has been yielding abnormal profit, supplies will be increased, prices and profits will be reduced, and there will be a fall in the rate of producer's surplus or quasi-rent. It will be as if the line $m\ m^7$ in our diagram were raised, businesses g and h will be pushed out of the trade, possibly, and replaced by more efficient competitors, and a new $m\ n^5$ will form the lower boundary of the producers' surplus. Thus quasi-rents do not inevitably continue in any particular line of business. They tend *not* to be permanent. Indeed, as population increases, and the general level of efficiency in production is raised, provided effective competition continues, they would tend to diminish in importance. But, in general, we must expect them to exist so long as differences in the ability with which businesses are managed, and variations in the other advantages of one business over another persist. Further, we have to remember that, in some businesses we are no longer able to rely upon the forces of competition even in England, still less, probably, in other great industrial countries like the United States and Germany. And where there is a complete, or an almost complete monopoly, whether it takes the form of a trust, kartel, working agreement, or what not, only the indirect competition of substitutes for the monopolised goods operates to reduce quasi-rents.

It seems to be true, therefore, that, in an increasing number of cases, we cannot trust to the operation of economic law acting under conditions of fairly free competition either to prevent prices rising above the necessary expenses of production, or to keep down the remuneration of invested capital and managing ability to the minimum which is necessary if these are to be forthcoming. It is for this reason that we see the State stepping in to regulate, or even to conduct industries which, in their nature, either are best conducted

as monopolies, or inevitably tend towards monopoly. Thus railway rates are subject to State regulations; gas company dividends are frequently regulated by an arrangement which provides that the higher the dividend paid, the lower the price which must be charged. And many local services, such as the supply of water, electricity, tramways, lighting have been municipalised. As to whether regulation or public ownership is the better policy, considerable difference of opinion exists; but, in the case of local monopolies, ownership is the policy most commonly adopted in England, the British Dominions, and Continental Europe.[1]

We now see why it is that we cannot say that "profits tend to a level," or "profits tend to a minimum." All that we can say is that, so far as conditions of fairly free competition exist, each of the elements of which "profits" taken in the widest meaning of the term, is composed, tends at any given moment to find the same level in each of the modes in which capital and managing ability can be employed. Net interest, the rate which can be obtained for lending money for safe investment in a business which requires no active superintendence from the lender, tends to be equal to the demand price of that part of the whole stock of capital which is least needed. Payment for risk will tend to be equal for equal risks. The earnings of management for persons of ordinary ability will tend to equal the price at which the least needed managing ability must offer itself if it is to be employed. But this ability is graded, the supply of different grades is limited, and the superior grades enjoy a *rent*, or *quasi-rent*, above the earnings of ordinary grades. Some businesses are very fortunately situated; some have been founded with greater foresight than others; some share in fortunate accidents such as the attraction of population to an area of which they are the centre; and thus, there come into existence quasi-rents, which may be called the rent of situation, the rent of foresight, the rent of luck or accident, or the rent of courage, or what you will. Some of these rents are subject

[1] See further, Chap. ix, p. 173.

to the possibility of complete destruction within a short time; and this will be the case if competitive businesses of a similar kind can easily be set up.[1] But quasi-rents, due to natural advantages, or permanent artificial advantages, tend to be more permanent; and businesses, competition with which requires great masses of capital or extraordinary ability or unique knowledge, may be regarded as furnishing a quasi-rent almost completely analogous to the economic rent of land.

As "profits" are made up of some or all of these different kinds of remuneration, we can only conclude as follows: Each of the elements in profits, except quasi-rents, under conditions of fairly free competition, tends to an equality as between different businesses yielding that element. Some quasi-rents tend to disappear; others are of all degrees of permanence forming a complete series, from the most temporary to the almost, or quite, permanent. Wherever there is, from any cause, a tendency to monopoly, profits will principally consist of a quasi-rent, especially if the monopoly produces something for which there is no efficient substitute. Thus, there can be no conclusion as to profits in general, but only as to the nature of, and the laws determining, the separate elements included under that general name.

[1] *e.g.*, The quasi-rent enjoyed for a time by a grocer or a doctor in a rapidly growing town will soon disappear so far as it is not due to the superior energy or ability of the grocer or the doctor. The rent enjoyed by the owner of the best situated lands in such towns is much more permanent, and is likely to increase if the prosperity of the town increases.

CHAPTER VII

LABOUR AND WAGES

LABOUR has been defined as any exertion of the mind or body undertaken from some motive other than the pleasure of the exertion itself. The motives other than pleasure may be many: a desire for fame, a desire to improve the lot of humanity, a desire for notoriety, a sub-conscious desire to exercise some special power or faculty, these, and many other motives may determine exertion; but the commonest motive, that which we may reasonably expect to find operating, with or without other motives, in all normal cases, is the desire to get a living. It is the existence of this motive which distinguishes the amateur from the professional. The professional footballer may love the game as well as the amateur, but he plays for pay as well as for fame and enjoyment. Work is often enjoyable, but it is not often done for that reason only. Moreover, a great deal of exertion in this world would not be undertaken at all were it not done in order to get a living. How many miners, cotton-spinners, iron-puddlers, ploughmen, teachers, would continue their work were it not for the pressure of economic necessity? Now, in modern times, as men seldom produce what they themselves consume, getting a living means receiving money, or some other form of purchasing power. Thus we are justified in assuming, as a rule (and, therefore, with the invariable exceptions), that men do act, so far as they have knowledge and opportunity, so as to apply their exertions to the best monetary advantage. We may therefore assume that, as a rule, the labourer will sell his labour (or as some would put it, the product of his labour) for the best price that he can.

The great mass of those who have labour to dispose of are, of course, those usually called the manual labourers. There are, however, many kinds of labour other than manual

labour, In fact there is no such thing as purely manual work. Most labour is a mixture, in varying proportions, of mental and manual efforts. As we have seen, the entrepreneur is merely a worker of a particular class. But we have already considered his earnings, and we shall mainly, though not exclusively, now be concerned with the remuneration of those workers who are employed, rather than with those who organise employment.

Further, we must bear in mind that labour cf all kinds is graded in the most elaborate fashion. For general purposes we may speak of workers as being divided into the professional class, the skilled workmen (including those whose skill is mainly clerical) and the unskilled. But we have to remember first, that absolutely unskilled labour does not exist, as many people find out when they attempt to wheel a barrow or dig a trench ; and, secondly, that each of these sections, the professional, the skilled, and the comparatively unskilled, and particularly the more or less skilled manual working class, is almost infinitely sub-divided and graded. There is, therefore, nothing which we can call "labour" in the mass and, consequently, there can be no one rate of "wages." The early economists, just as they neglected to analyse profits, also seem to have failed to realise that there was no homogeneous class of labourers.

Nevertheless there is a broad principle which governs the remuneration of the labourer to whatever class he belongs. Labour, like managing ability and the use of capital, may be considered as a commodity to which the general law of value applies. The value of labour will vary according to the quantity of it to be disposed of at any given moment. The larger the quantity the lower the price at which each unit must be offered if it is all to be employed. And the value of each unit will depend upon the value of the least needed portion. Thus, the value of labour, or, to use the ordinary term, the rate of wages, will tend to be equal to the wages which must be taken by the "marginal" labourers if they are to get employment, the wages which must be offered if

such marginal labour is to be forthcoming. Thus, if competition for employment were perfectly free, and knowledge as to what wages were being paid were perfectly disseminated, the wages of all workmen of the same class would always be tending to equality, and to a rate indicated by the marginal utility of their labour.

But competition among all those having labour to offer is not perfectly free. If all labour were comparatively unskilled and workmen could move rapidly from one trade to another, and the kinds of work for which higher rates of pay were, for the moment, obtainable became rapidly known, then, it is plain, that inequalities in wages could not exist for any considerable length of time. So, if all trades were skilled, provided it took no more time or trouble to learn one than to learn another, and there were no artificial obstacles placed in the way of anyone wishing to learn a particular trade, then, again, there would be no permanent inequalities between the earnings of different trades. The tendency to equality would work itself out more slowly ; for the increase in the supply of labour which would be caused in any trade where the quantity of labour employed was small in relation to the demand for it, would have to take the form mainly of a larger number of beginners learning the trade, and this takes time.[1] If, therefore, all work were skilled, and equally skilled, and all labourers were of the same quality, *i.e.*, equally strong, competent and reliable, then wages would again tend to equality, both as between different trades, and as between the individuals engaged in each trade. And the rate of wages would be indicated by the marginal utility of labour, that is by the wages of the least needed labourers.

But all men are not alike. This leads to differences between the earnings of one labourer and another. Moreover, the

[1] It is very probable that the adjustment of numbers as between trade and trade, *does* actually take place in this fashion to-day. A fully trained artisan who has been employed at a particular trade for some time seldom changes it. In fact, in some trades to-day, a too highly specialised manual skill is not desirable, as owing to rapid industrial changes, it may become unmarketable.

entry to all occupations is not equally difficult. Some trades require more delicate skill, greater physical strength, a longer or a more costly training than others; and to many trades some artificial obstacles to entry are imposed. From all these causes, and from others, the free competition of workers, whether we consider short periods of time or long, is impeded, and the supply of workers in some occupations is restricted. From such causes as these the inequalities in the remuneration of workers in different occupations arise. Let us consider these two points for a moment.

First, as to the differences, physical, mental, or moral, between the individuals employed in the same occupation. Blacksmiths, for instance, require physical strength, intelligence, that kind of correlation between hand and brain which sportsmen call "a good eye," and the moral qualities such as perseverance, the determination to overcome difficulties, moral courage, in the presence of some unanticipated event, and so forth. Now all the blacksmiths at work to-day possesses these qualities in varying degrees. They constitute the "advantages" of different blacksmiths parallel to the "advantages" of land. It is true that the wages of blacksmiths in general will depend upon the quantity of blacksmith's labour in existence, within the area of competition, the greater the number of blacksmiths the less the wage, and *vice versâ;* but, if the blacksmith, possessing to the highest degree the qualities we have described, can produce twice as much as the blacksmith possessing them to the lowest degree, then, whatever the general rate of wages, the first blacksmith will tend to earn twice as much as the second. Any increase or decrease in the number of blacksmiths relatively to the demand for them will affect the wages of both, but the one will, nevertheless, remain worth twice as much as the other. The employer who pays £2 to the first for every £1 he pays to the second is really paying the same rate of wages. The wages are proportioned to the efficiency (that is, to the output) of the worker, and have been called "efficiency wages." The reader will have noted that such

inequality of remuneration is strictly parallel to the inequalities in rent, and it arises from a similar cause. The model, or, if the adjective is preferred, the fortunate blacksmith, possesses differential advantages over the less exemplary, or the more unfortunate blacksmith. He, therefore, takes the rent of his ability because he is the meritorious (or fortunate) owner of superior ability, just as the owner of the "best" land takes the highest rent. Thus, the conception of "rent" enters into the analysis of individual wages as well as into interest and "profits." And just as the difference between the most advantageous and the least advantageous land (so far, at least, as the advantages consist in differences in natural fertility) cannot be done away with, neither can natural differences in ability between man and man. Thus, under conditions of fairly free competition, the general rate of wages in a trade will depend upon the numbers engaged in that trade relatively to the demand for their services; the individual wage will vary according to the differences of ability. In the wages of the ablest workmen there will be a large element of quasi-rent; and the proportion of quasi-rent in wages will vary down to nothing in the case of the least advantageous workman who takes the marginal wage.[1]

To come to our second point. It is obvious that a navvy does not compete with the solicitor. The fact that the local doctor probably earns on the average £600 a year, whilst the ploughman earns £50 if he is lucky, does not lead the latter to divert his labour from ploughing to doctoring, unless, indeed, his natural genius leads him to set up as a bone-setter

[1] It may be said that, in general, the rules of Trade Unions do not preclude the payment of differential wages. Where the unions insist on the payment of a time wage the rate is a *minimum* wage. Where piece work is the rule, a piece wage obviously lends itself to the payment of something approaching an efficiency wage. Thus, in an engineering workshop known to the writer, the trade union rate for fitters is 31s. 6d., but, as a matter of fact, few fitters earn as little as this, and the best class of workmen may average from 45s. to 55s. a week. Similarly, weavers in the cotton trade, are paid at a uniform piece-work rate; but they may work a varying number of looms, and their earnings depend somewhat on not having to stop because of breakages, always turning out satisfactory fabric and so on.

(whose earnings are a striking illustration of rent of ability, by the way). The reason for this is plain. The doctor and the solicitor need a long and expensive training. The ordinary manual worker cannot undergo this training, and, indeed, after he reaches manhood, he is incapable of undergoing it even if he could afford the time or expense. What is more important, his children cannot undergo the necessary training. It is true, though probably now less true than ever it was, that many workmen have no wish that their children should be trained. It is also true that some of their children are incapable of being trained, but this is equally true of some of the children of the professional and trading classes. Any child of quite ordinary ability is capable of undergoing the training necessary for the production of professional or business men. For professional and business men are, as a rule, persons of quite ordinary ability. Otherwise there would not be many of them, since first-rate ability is very scarce. Broadly speaking, it is the expense of preliminary training that diminishes the supply of candidates for the better paid occupations. And the supply of candidates for the better paid skilled manual occupations and the clerical and "lower middle class" occupations is diminished by the unwillingness and, frequently, the inability of the poorer paid wage-earners to keep their children out of "blind alley" occupations, at first fairly well paid. In fact we may say that each class (and the classes are extremely numerous) is prevented from sending its children to recruit the classes of workers immediately or two or three stages above it for three reasons.

(1) Such action is difficult because the family upbringing in each social class is different, the difference arising mainly out of the varying standards of income and, therefore, of expenditure. The children of the casual labourer have a social "tone" as different from that of the skilled artisan, as is that between the family of the stockbroker and that of his clerk. Social education must inevitably take place chiefly in the home; and the long home training on any one social grade, as a rule, prepares for occupation in that

grade and not in any of the grades above it. What is required in each kind of work is not merely the strictly technical skill, but outlook, manner, bearing. It is the absence of these which operates powerfully against merely ordinarily intelligent and energetic people rising.

(2) Secondly, many people are unable or unwilling to undergo what we may call the *negative* expense of training children for better paid occupations. They cannot, or will not, forego the earnings of their children. For boys and girls can frequently obtain good wages from fourteen years old to eighteen, whilst, if the children are kept at school, or at some training place, their cost of maintenance is continuously rising.

(3) The positive expense of training for some occupations is great. The best paid professions, outside commercial pursuits, frequently involve keeping children at school until the age of from sixteen to nineteen, with a subsequent technical or university training for three, four, or five years, with high fees, premiums, and the like, to pay. Thus a barrister, for instance, not only usually finds a prolonged secondary education followed by a University education necessary, but the mere fees for admission to the bar will amount to about £150 ; and few men can succeed without becoming pupils of practising barristers and paying £100 for the privilege. Similar payments block the way to the practice of medicine, to architecture, even to art, to accountancy and actuarial appointments, and to civil or mechanical engineering, and the higher civil and municipal service.

Thus we must conclude that, on these grounds alone, there is no such thing as competition between labourers of different grades.

It is, therefore, true, not that wages tend to an equality, but that remunerations in each grade tend to something like an equality. If, for instance, it should be true that the average earnings of solicitors were increasing whilst those of doctors were decreasing, then young men who might have become doctors would tend to become solicitors. Similarly,

if boiler-makers' wages seem to be rising whilst smiths' wages are stationary or declining, those boys who might have become smiths will tend to become boiler-makers. Similar competition will take place among all those young people entering occupations of the same grade.

It should here be noticed that the public activities which tend to divert boys and girls out of "blind alley" occupations, such as street trading, van work, and so forth, and the free distribution of secondary education, the grants of scholarships to universities, all tend to increase the freedom of competition for the better paid posts and, probably, tend towards the equalisation of remunerations as between occupations of different social grades. For they tend to make unskilled and casual labour scarcer and therefore dearer. They tend to increase the supply of skilled and educated workers and therefore, if no changes in demand take place, to diminish the difference between the higher and the lower grades of pay; but it would be rash to conclude that they will actually diminish earnings in those grades since the demand for skilled and educated work may be expected to increase with the increased productiveness of skilled and educated labour. There is no fixed amount of work to be done. The more productive labour can be made the larger is the fund from which labour can be paid. This is a point to which we shall return later.

We have already shown above how labour is graded and, therefore, how competition is very imperfect, because people either cannot, or will not, go to the expense of fitting their children (the future labour supply) for the better paid occupations. This is as if the producer of goods, knowing that there was a sale for a commodity of a higher quality than hitherto produced for a higher price, could not, or would not, undertake the necessary expenses of producing that commodity. Here we see how labour differs from an ordinary commodity. If higher expenses of production of any commodity will pretty certainly be met out of a higher price, then we may trust to the foresight of business men to produce

such a commodity. For it will "pay" them to produce it. But we cannot trust to this motive acting upon those in charge of youth. For here the person who pays the expense does not receive the reward. The higher remuneration which is received at the end of the training is received, as a rule, not by the parent who meets the cost, but by the person trained. Thus the purely economic motive fails us.

And labour differs in many other ways from ordinary commodities. The key to the difference always is that the labourer is a human being, and neither inanimate matter, nor a brute creature. Thus, if a man sells bricks, it matters nothing to him who buys the bricks or where they are used. But the seller of labour is a human being selling his own services, and it may matter much to him to whom he sells his services, and where they are to be rendered. If he is living in Glasgow the fact that better wages may be obtained, say in London, will not always cause him to remove thither. Such a removal may mean the breaking up of a home, or the leaving it, the shifting from congenial surroundings to strange ones, the sacrifice of many interests outside the daily work, and, moreover, the cost of removal. There doubtless will be a tendency for the move to take place, especially in the case of the young and enterprising. Nevertheless labour is nothing like so mobile as an ordinary commodity. Again, the labourer has often the greatest difficulty in finding out whether his wages are higher or lower than elsewhere. In fact, the difficulty of comparing the real remuneration of labour, either as between different places or as between different dates is very great. There are two distinct sets of reasons for this:

(1) We have to distinguish between *nominal or money wages* and *real wages*. For instance, the money wages a worker receives are often supplemented by the receipt of other advantages. A housemaid may receive £20 a year, a girl of the same class working in a factory may be paid at the rate of £40, and a typist in an office £60. But the domestic servant receives food, lodging, and, sometimes, clothing in addition to her money wage. The factory

girl's wages may be subject to fines or deductions for unpunctuality, bad work, or, in some cases, she may have to pay for material used, or for the use of a machine. The typist may have to pay for travelling from the outskirts of a town to its centre. She may have to take meals out instead of at home. Before any comparison could properly be made we should have to work out the following calculation with regard to each of them:

Money wages + value of other advantages received − value of the disadvantages of the occupation.

Similar comparisons could be made between the actual remunerations of, say, an engineer in a textile machine works, a chauffeur, and a solicitor's clerk working in the same town.

But when we come to compare the earnings in the same occupations pursued at different places (whether within the same country or not) another great difficulty occurs. If the prices of the things consumed by the wage-earners in one place were twice as high as in another, then, plainly, a wage of £2 a week in the first place would only be equivalent to £1 a week in the second. We know, too, that prices vary from time to time. Thus, prices fell from about 1873 to 1896 by something like 33 per cent. Since 1896, or soon thereafter, prices have been rising pretty steadily, so that it is highly probable that 110 shillings only buys in 1911, as much as 100 shillings did in 1900. A man, paid solely in money, whose money wage was in 1896 just what it was in 1873, was receiving *real* wages, higher by at least one-third. Retail prices do not, as a rule, vary so much between one place and another within the same state, as they do between one period of time and another. Nevertheless there are considerable variations, especially in house rent.

To estimate, therefore, the true income in terms of money, of some wage-earners is difficult; to make comparisons between incomes is more difficult, even for a trained

investigator, because we have not merely to compare money (nominal) wages, but we have to compare the purchasing power of those wages, and this is a matter of not a little complication.

(2) There is another difficulty. *Wages are paid in different ways.* There are first of all *time wages*, the worker being paid a defined sum an hour, week, month, or year. Secondly, there are *piece wages*, where the payment is made not for units of time spent, but for units of work accomplished. And there are very many different combinations of the two varieties, as where work is given out to groups of workmen who receive a minimum time-rate of wages, but their work is priced and the *group* is paid at piece-work rates for all work done by the group at this piece-work rate, the members of the group earning anything say up to their time wage plus 25 per cent., and the "charge man" of the group taking the balance. The number of wage-paying devices is very numerous. For this reason it is sometimes difficult for anyone outside the trade to discover what are the normal earnings within that trade.

Moreover, even when rates of wages are, upon inquiry, easily ascertainable, such inquiry by men actually at work in manual occupations is difficult. How many agricultural labourers, earning 15s. to 16s. a week, all told, in Wiltshire or Oxfordshire know that the rates of wages in Lancashire, Northumberland, and the South of Scotland are very much higher, sometimes nearly twice as high. The knowledge, even of the skilled artisan as to wages in other districts than his own is often very imperfect, though the existence of trade unions, with their varying local trade union rates, and the fact that many artisans have friends or relatives working in distant towns, tend to disseminate such knowledge. Still less can we count upon the correct *knowledge* of the less skilled groups of workers. They do not read the Government and other publications which contain such information. They are not organised; and they have no expert officials to inform them.

Thus for these and other reasons the labourer usually has much less accurate knowledge of the market value of the commodity (labour) which he sells than has the seller of other commodities. The corn merchant and the boot factor keep their eye on the markets much more vigilantly than the ordinary workman, and they enjoy very much better facilities for doing so.

Another fact to be taken into account is, that of all commodities labour is the most perishable. If it is not delivered from day to day it is lost entirely. A labourer who is not employed for any given day's work loses that day's work for ever. He cannot store it up. Thus, he loses one of the greatest of bargaining advantages, the power to withhold supplies when prices are falling. The farmer, or the manufacturer, or the merchant, can often wait before he sells his goods without damaging those goods. It is true that many commodities deteriorate with keeping, and this in varying degrees. It is true also that only those entrepreneurs, whether manufacturers or merchants, or whatever they may be, who have a good working balance of spare wealth can afford to hold out long to secure good prices. "Economic staying power" varies. But the labourer deals in a commodity which is instantly perishable, and, by himself, he possesses very little "economic staying power" indeed; and the lower his rate of pay the smaller his power of withholding his labour during any bargaining process.

A further influence which prevents free competition in labour is the influence of custom. In some cases there is a more or less customary wage, and the labourer, so long as he gets it, does not trouble to inquire whether he could get more, nor the employer (though less frequently) whether he could pay less. This is still the case to a certain extent with agricultural labour. It was for a long time the case with the pay of soldiers; and custom is probably still operative with regard to some professional fees, especially if comparatively short periods of time, say a generation, be alone considered. Domestic service, too, whether permanent, or

paid for by the day, such as washing and "charing," is subject very considerably to custom. And, during the middle ages, and to-day in some countries, such as India, which cannot be described as uncivilised, custom has a very great deal to do with the fixation of rates of wages. Probably in countries like England and the United States and most "industrialised" European Countries, and even in countries like Russia and Spain where the standard of education is low, the influence of custom is very rapidly diminishing; but it has not, by any means, disappeared even in our land.

It will be seen, therefore, that labour differs in many material respects from other commodities. The labour supply consists of men and women, who must *themselves* deliver their labour, to whom, therefore, the place in which, the circumstances under which, and the person to whom the labour is delivered matter very much. It is sometimes difficult, especially for the labourer, to know what the price of labour, in other places or in other occupations, is; it is difficult for the labourer to withhold such a perishable thing as his labour from the market, and, unless organised with his fellows, his power of bargaining for the full remuneration which economic conditions might justify is very limited; those who bear the cost of improving the quality of labour do not always, or usually, reap the reward of the higher price to be obtained for the superior article; and for such improvement we must rely upon non-economic motives of individuals such as family affection or upon enlightened political action. Finally, the price of labour is more likely to be affected by custom than the price of what labour produces.

We have shown, therefore, that the wages of any class of labourers tend, under conditions of fairly free competition, to be equal to the marginal utility of that class of labour. The marginal utility arises, of course, from the productiveness of the marginal labourers. This is only a particular application of the general law of value. But labour is so unlike other commodities that these general laws of value will work with a very great deal of "friction" in the case of

labour. We must now further inquire how far, when we allow time to enter as a consideration there is likely to ensue any approximation of the normal value of labour to the expenses of production of the labourer. In other words, is there anything which compels the rate of wages to be tending always to a level at which the labourer can maintain himself in efficiency, and bring up his family so as to fit them to occupy positions at least as good as his own? We have already anticipated to some extent the answer to our question. As regards what we may term the market price of labour in contradistinction to the "long period" or normal value, the answer is "No." The market price of labour, that is the current rate of remuneration in any given occupation is dependent entirely upon the demand for labour in that occupation in relation to the existing supply of it. If, therefore, the labour is of a skilled kind, requiring special rather than general aptitude, a very high rate of remuneration will not attract a larger supply of labour into it, and so cause a fall in the rate of remuneration, for it is necessary for new supplies of labour to be forthcoming, and this takes time. Nor, if the remuneration be low in relation to the "*standard of comfort*" of the workers in the group to be considered, will it usually be possible for them to divert their labour rapidly into some other occupation. Of course, if the ability required is general rather than special, and this is becoming, to a considerable extent, the case in various trades where general mechanical knowledge is the most important requisite, then the diversion may be pretty rapid. But, speaking generally, it is quite possible for wages to remain high, or to remain very low, in any given trade, for a considerable period, stretching into years, a generation, or in some cases much longer.

If we take periods long enough for the creation of new supplies of labour, that is, for the education and training of the young, then we may argue legitimately that, in occupations recruited from the social levels where foresight and prudence can be expected, whenever the remuneration in any trade is

more than requisite for the upbringing of a family in the social group to which the trade belongs, new supplies of labour will be attracted into that trade, and the remuneration will tend to fall to, or temporarily below that "standard of comfort." Similarly, when the remuneration of the trade is below that standard the new supplies will be diverted to other occupations and the earnings will tend to rise. But, of course, in any of these circumstances special ability and good fortune will still be able to command a "rent" above the marginal, or if the marginal supply of labour is a large part of the whole, the general rate of remuneration. Thus, in most occupations, from those of the fairly skilled artisan class, and the ordinary clerk, upwards in the scale of remuneration, the normal earnings of each group tend towards that standard of comfort in each group, which we may take as representing the cost of production of the worker. But we must be careful to remember that this process works itself out with considerable friction, and very slowly; and that the lower we go down in the scale of remuneration the more imperfect is the process.

When, however, we come to very low grades of labour, though it may remain true that the standard of comfort of such labourers is an index of what they require in order to bring up a family, the members of which can replace them, that standard is almost certainly lower than is required to bring up fully efficient workers of any class. In respect of housing, furniture, clothing, cleanliness, and even food, it is lower than would be allowed in a prison or a workhouse. And the researches of Mr. Booth and Mr. Rowntree show that a pretty considerable section of the population, at least in London and in York at the time of their investigations, live even in respect of food, at a lower level than prisoners and indoor paupers. Now the slight variations which take place in the rates of wages we are now considering do little or nothing, whether in the "long" or the "short run" to affect the supply of such labour. The supply of low skilled labour is probably always greater than the demand for it. The miserable wages of the "sweated" trades do nothing to

restrain the multiplication of the class of labourers who can be "sweated" and will put up with the process; for their very circumstances induce a lack of foresight, and consequential early marriages and reckless conduct. Hence the high birth rate among such people; and their supply, if left entirely to the unregulated action of economic forces, tends only to be checked by a high death rate, and especially by a lamentably high rate of infantile mortality. Moreover, as some criminals and many paupers, especially pauper children and the aged and worn-out, are derived from the class in question, and the cost of maintaining these in one fashion or another falls almost entirely on those who pay rates and taxes, the cost of maintaining them during some part of their lives falls upon the workers of all grades in the better paid occupations. Thus we see that, if no action be taken to regulate the conditions under which such a class lives, and to regulate their wages, and, more important still, their real incomes, a class of people permanently parasitic on the rest of the community tends to persist. It is a recognition of this fact which has led to legislation for the regulation of wages both in England and Australia, and to much other legislation, the aim of which is not to regulate wages, as such, but to supplement them by the provision of proper housing and sanitary accommodation, and to lift such a class bodily to a decent minimum of existence.

Thus we see that wages in general do not tend downwards to any minimum of *subsistence*. In the case of unorganised masses of low grade labour the wage may, under conditions of free competition, for long remain below any decent minimum. In other cases remunerations will, if very long periods of time be taken, tend to bear some relation to a class standard of comfort; but this standard may rise *with the increasing productive efficiency* of the labourers, provided labour can bargain efficiently so as to obtain the rise of wages justified; and, of course, it has risen. Wages depend, as has already been explained, upon the utility of labour, and this, of course, depends upon what the labourer, of

whatever class or kind, can produce. The greater the produce the higher the possible remuneration. And if a higher level of income be maintained for any length of time it will crystallise into a higher standard of comfort. In this sense we can say that the remuneration of the labourer tends, in all except the lowest classes of labour, to conform, in the long run, to the expenses of producing the labourers, remembering well, however, that such normal expenses are by no means fixed.

The early economists, from Adam Smith[1] to Ricardo[2], held that wages tended down to the cost of subsistence of the labourer, though Ricardo seems to have recognised that that cost of subsistence was not necessarily stationary. He, nevertheless, seems to have expected the level of manual workers' wages to remain very low. We have already noted the fact that to talk of the "wages of labour" reaching any level at all, without taking account of the manner in which labour is graded, leads to no valid conclusion. But the "subsistence theory of wages," as held by the successors of Adam Smith, was really based upon a theory as to the growth of the labour supply, that is the growth of the population, which it is necessary for us to examine. The subsistence theory of wages was based upon the teaching of Malthus. Malthus published, in 1798, his *Essay upon the Principle of Population.*[3] It is, perhaps, difficult to summarise his teaching at once accurately and briefly. But his main teaching appears to be as follows:

(1) The number of mankind tend to increase very rapidly, unless this increase is prevented by checks of two kinds: (*a*) positive checks such as war, infanticide, disease, and famine; (*b*) preventive checks such as abstinence from or delay of marriage. This increase in numbers, said Malthus, was in a geometric ratio, that is to say, population tended

[1] Adam Smith's *Wealth of Nations* was published in 1776.

[2] David Ricardo's *Principles of Political Economy and Taxation* was published in 1817.

[3] A second edition was published in 1803, and must be taken to contain his more considered views.

to *multiply* itself, a most moderate computation being that it would double itself every twenty-five years, in the absence of checks, and many of the " positive " checks were, in his time, disappearing or had disappeared.

(2) The subsistence of mankind tends to increase much more slowly than the population. Malthus does not give any estimate of how fast the products of the earth can be increased. But he suggests that they can only be increased by additions, that is, in an arithmetic ratio. He does not specifically state that this is due to the operation of a law of diminishing returns. He seems, however, though not using the phrase, to have recognised the existence of such a law. Thus, owing to the comparatively rapid increase in numbers, and the comparatively slow increase in the quantities of food, population constantly tends to outrun the means of subsistence.

(3) He contended that this relation between population and food supply was permanent ; and, therefore, that as the positive checks became weaker, if the numbers of mankind were not checked by prudence and moral restraint they would be checked by misery and starvation.

When the tendency to diminishing returns in agriculture became fully recognised by subsequent writers, it is easy to see that a theory of wages could be based upon this teaching as to population. Wages, it was argued, could not permanently rise above the subsistence level of the labourer, for high wages would only mean earlier marriages, a rapidly increasing population, an increase in the supply of labour and therefore a fall of wages again until subsistence level was reached. This was the " Iron " or " Brazen " Law of wages. We have already shown that it has no substance in fact. Earnings are indicated by the utility of the least needed labour, and this utility depends upon the productiveness of labour. The general rate of pay, therefore, depends upon the general productiveness of labour, and under conditions of free competition, the specially able worker of whatever class tends to receive a quasi-rent of ability. Thus, if the productiveness

of labour increases, whether the increase is due to the increased efficiency of the labourer himself, or of the appliances with which he works, or of the general organisation of production, or the general improvement of social conditions by legislation or otherwise, wages may rise considerably above what has hitherto been considered the standard of life for any given class. Gradually the standard of life may rise, and new standards become comparatively fixed. This is what has occurred in most western civilised countries, and, indeed, elsewhere during the last century. Of course in a declining society we may well conceive of a standard of comfort being lowered; and, in both cases, it is well to remember that the standard of comfort changes but slowly. In recent years, however, it seems to have risen with some rapidity, especially among the better-to-do middle classes.

We may here consider the validity of Malthus's general doctrines as well as the validity of the theory of wages based upon them. He inferred from the fact that mankind tends to multiply itself rapidly, whilst nature displays a tendency to diminishing returns, that an increase in the numbers within a state led necessarily to an increase of poverty. But if we compare the conditions of nearly all civilised countries, say, as between 1801 and 1901, or 1911, we see very great increases of population have been accompanied by great increases in the wealth of nations, increases applying to all classes of society, though probably not evenly distributed. In England, for instance, the population increased from 8,892,000 in 1801 to 32,527,000 in 1901, yet the rate of wages has considerably increased whilst the hours of labour have diminished. How is this to be reconciled with the teachings of Malthus? The answer is that, whilst in some respects Malthus's contentions have a basis in fact, he was completely at fault in supposing that the law of diminishing returns applies to all forms of production. It does not, for instance, as we have already shown, apply even to agriculture in a "new" country where there is plenty of land, and where cultivation can be made much more thorough

than it is without sensibly diminishing the return. Nor does it always apply even to agriculture in old countries. The *tendency* to diminishing returns cannot be overcome; but by labour-saving devices, the use of new fertilisers, new rotations, in fact by the advance of agricultural science and art generally, the *operation* of the law has been, and can be postponed. Moreover, as we shall presently show, in many cases the aggregation of an efficient labour supply admits of such organisation that the productive power of labour can be greatly improved and even multiplied. Transport, too, can bring in the agricultural abundance of new lands to remedy the deficiencies of the old. In short the productive power of man has increased, is increasing, and shows no present sign of diminishing. As long as this remains true mankind will be able to support itself in increasing numbers with increasing comfort. The number of the people, therefore, is not necessarily kept down by starvation, as positive checks to it diminish in number and strength. The increasing poverty which Malthus anticipated from an increase of population has not ensued, and, unless the ingenuity of man in overcoming the niggardliness of nature fails, it need not ensue. Nor, on the other hand, is there anything to show that a decline in the population of England, for instance, would be accompanied by any increase in prosperity.[1]

There is one other theory of wages that we must notice, namely what is known as the "*wage fund theory.*" In its crudest form its exponents stated that the amount of wages payable was limited by the amount of capital in existence, and the inference was drawn that the amount of wages which could be paid within any given period was fixed. That capital out of which the wages were paid was "saved" beforehand,

[1] Malthus also assumed that higher wages meant a higher marriage and birth rate. This seems not to be the case. The more comfortable people become the later they must marry to secure their standard of comfort. And, the better paid artisans, let alone the middle class, seem to have fewer children than the ill-paid unskilled labourer. It seems as if poverty, and not prosperity, leads to a high birth rate among civilised peoples.

as it were. Its amount, therefore, could not be increased, and, thus, if the wages of any one group of workers rose that of another group must fall. Even Mill went so far as to state that wages depended upon the proportion between "the number of the working class . . . who work for hire" and "the aggregate of what may be called the wages-fund, which consist of that part of the circulating capital . . . . which is expended in the direct hire of labour."[1]

The fundamental error here consists in regarding wages as being paid out of capital at all. Wages are not paid out of accumulated wealth, whether that wealth is used as trade capital or not. They are a share of the *produce* of industry, or, if we call the whole produce of industry and commerce within any given state *the national dividend*, wages are the labourers' share of the national dividend. As the produce of industry, the national dividend, increases, it at least becomes possible for the wages of the labourer to increase. And, as this process of production is continuous, and wages are paid out of the current produce of industry, the only necessary limit to the rise of the labourer's wages is the limit of his efficiency. As his efficiency increases, or, better, as the efficiency of the marginal labourers increases, the utility of their labour increases, and their rate of wages will, if the claim of the labourer be properly made good, rise. An increase in the number of labourers, as we have seen, will not necessarily diminish the earnings of labour, provided their increased product is at least in proportion to their increased number. Labour is not paid out of any fixed sum of previously accumulated capital, but out of a *stream* of products, the volume of which is not fixed but is capable of variation in relation to the number of producers. And the tendency of this stream, where production is highly organised, and men are intelligent, well trained, and healthy, appears to be to increase faster than an increasing population.

To sum up then. The value of any given form of labour will depend upon its quantity in relation to the demand for

[1] He completely abandoned this doctrine before his death.

it. The larger the supply at any given moment the smaller must be the price at which it offers itself if it is all to be employed. Thus, the rate of earnings of any given class of labourers, manual or other, will tend to be indicated by the marginal utility of this particular class of labour. But wo_kers of special ability will, under conditions of fairly free competition, tend to receive a "quasi-rent" of their ability above the rate received by the labourers whose services can only profitably be used at the current rate. This marginal utility is, of course, not fixed. If it increases, wages will tend to increase, too. For the utility of labour will depend mainly upon the efficiency of the labourer, and thus his wages will tend to be governed by his productiveness. In other words, wages will tend to be equal to the net product of the marginal labourers. This, however, assumes that the labourer can sell his labour, very much in the same way, as a good business man will sell his goods. But the labourer must himself move when he changes the market in which he sells his labour. His labour is very perishable. He is often ignorant of the conditions of his market ; and as regards the new supplies of labour the cost of the productions is very largely borne by those who do not get the price. Thus the tendency of the earnings of labour to approximate to the marginal utility of labour is only imperfect. The chief function of trade organisations must be to see that minimum wages do not fall below the net productiveness of the marginal labour, by giving to the individual the necessary information, and the additional bargaining experience and strength.

CHAPTER VIII

MONEY

Every society has, in an early stage of its development, adopted some definitely recognised medium of exchange. The difficulties of barter are very great even under the most primitive conditions. The man who has a superfluous horse and wants an ox, has to find the man who has a superfluous ox and wants a horse. And those who have superfluous oxen may not want horses. Before barter can take place there must be a *double coincidence*, the people who have the superfluous oxen must be those who want horses, *and* the people who have superfluous horses must want oxen. Such a double coincidence is not a matter of common occurrence. Further, horses and oxen and all the commodities which they may be taken to represent, are not divisible. There is, therefore, no means of adjusting the value given to the value received. In barter, therefore, there can be no certainty of proper equivalence between what is given and received. Thus a medium of exchange which can be adjusted to any degree of value is required. Without such a medium modern social organisation is inconceivable. Few people produce anything which is barterable. The whole of modern society involves specialisation, division of employments. This is based upon exchange, and, without some generally acceptable medium of exchange and some authorised measure of values, rapid and accurate exchange would be impossible. Money, it has been said, is the alchemist's stone by which we can change what we have into what we want. It is to the exchange of goods what language is to the exchange of ideas.

Money, then, is an essential part of the mechanism of exchange. In order that exchange may be effected smoothly money must perform the following functions: (1) It must be a medium of exchange. (2) It must be a measure of values.

(3) It must be a means of transferring value from place to place. (4) It must be the standard in terms of which payments to be made at future dates can be commonly fixed.

The third and fourth of these functions are sometimes described by the statement that money acts as a "store of value."

(1) The Medium of Exchange.

We have already referred to the necessity of a medium of exchange. To realise the importance of such a medium we have only to imagine what would happen were no such medium in common use. Most of the occupations in which we are engaged would at once become impossible; we should be unable to ride on an omnibus, take tea in a teashop, or purchase a newspaper. Society as it now exists would collapse.

But before we pass from this function let us notice how many different things are in use as mediums of exchange. If a man purchases an article for £183 3s. 11d. he can pay the price in many different ways. He can, if he likes, pay down £183 in gold, and 3s. 11d. in silver and copper. The payee must, by law, take this, even if he would have preferred to be paid in some other way. Again the debt might have been paid by Bank of England notes to the value of £180, three pounds in gold and 3s. 11d. in silver and copper. This also the payee must by law accept. A minimum of this kind, which a creditor must accept in payment of his debt, is called *Legal Tender.* Legal tender in England consists of: (*a*) gold coins, viz., the pound sterling, and the half sovereign as defined in the Coinage Act, 1870; (*b*) Bank of England Notes, except when tendered by the Bank itself. These are legal tender up to any amount; (*c*) silver and copper coins; but silver is legal tender only for debts of not more than forty shillings, and copper for not more than twelve pence. We have to distinguish then between the gold coins and the other coins.

The standard money as fixed by Act of Parliament consists

of gold only. The silver and the copper coins are mere tokens representing fractional parts of a gold "pound." It is declared by law that twenty shillings, or eight half-crowns, or ten florins, and so forth, shall be taken as the equivalent of a sovereign. But a sovereign would purchase a weight of uncoined silver (silver bullion) nearly twice as great as the weight of twenty shillings. Similarly a sovereign would purchase a weight of copper much greater than that of 240 pence. The real metallic value of the silver and copper coins, therefore, is much less than their face value. Such tokens are used because it is necessary to have coins for common use, which represent fractions of a sovereign less than one-half. Such coins, if made of gold, would be too small for use. Even a quarter-sovereign if made of gold would be as inconvenient as a threepenny piece now is ; and smaller gold coins would, in practice, prove impossible.

Thus we have two other varieties of money in use as mediums of exchange, *Standard coin* and *Token coin.* The standard coin is that which is deemed by Act of Parliament to be unlimited legal tender, and the value of which, in terms of the metal of which it is made, is proportionate to the weight of metal it contains. Thus, a sovereign will purchase its own weight of twenty-two carat gold. A half-crown, however, will purchase about twice its weight in silver, for the reason that its value has nothing to do with the weight of silver it contains, but depends upon the fact that, by law, it passes for one-eighth of a pound. Similarly when we say the price of an article is a shilling, or sixpence, or a penny, what we really mean is that its price is $\frac{1}{20}$th, or $\frac{1}{40}$th, or $\frac{1}{240}$th of a pound.

But, in all probability, the debtor we are considering would have paid his debt by writing out a cheque for £183 3s. 11d. That is to say, he will have his "money," not in his own possession, but deposited in a bank. His deposit there is a debt due to him and payable whenever he likes to call for its payment. He is the creditor of the bank to the extent of his deposit with it. Thus, when he pays his £183 3s. 11d. by

cheque, he transfers credit to that amount from himself to the payee. Credit, then, is used as a medium of exchange, and is by far the most important medium. Practically all wholesale, and an increasing proportion of retail business is transacted by means of cheques and other credit instruments. For it is also possible that the debt might have been paid by the debtor allowing the creditoı to draw a bill of exchange upon him, or the debtor might have given his promissory note. All such documents are means of using credit as a medium of exchange. But it will be noticed that they are all payable, either at sight, or at some future date in terms of coin. They *represent* standard money and, where necessary, fractions of the standard coin. Thus, cheques, bills, promissory notes and other credit instruments (including bank notes, which are only a variety of promissory notes) are termed *Representative money*. Such representative money is used in very large quantities in our country, the total of cheques passing through the Clearing House, annually, now exceeding £12,000,000,000. Representative money thus forms the commonest medium of exchange; but it is not legal tender; no one need accept a cheque in discharge of a debt unless he pleases or unless he contracts so to do.

Thus we see that several different kinds of money are used as the medium of exchange, Legal Tender, which may be Bank of England notes, or gold, silver or copper coins; Standard money, *i.e.*, gold coin; Token money, *i.e.*, silver and copper coin; and Representative money, such as bank notes, cheques, bills of exchange, and promissory notes.

(2) The Measure of Value.

Money acts not only as a medium of exchange but as a measure of value. In fact this is its most important function. It is inevitable that, once a medium of exchange comes into common use, the values of articles exchanged shall be expressed in terms of that medium. The medium is used not merely to effect exchanges, but to measure the values of the articles exchanged. If a walking stick of a particular kind

is sold for half-a-crown, and a silk hat for a pound, then we infer that a silk hat is worth eight walking sticks. We can, however, express the values of articles which are not sold in terms of money. If there are a hundred similar houses in a street, and it is found by experience that on several being sold they fetch £350 each, then so long as circumstances do not change we can say that the remaining houses are worth £350 each; indeed, to value houses, or any kind of property, from stocks and shares to a grocer's unsold supply of sugar, is a very ordinary act of business.

We must notice, however, that not all those things which are mediums of exchange are measures of value. The unit used in the measurement of value in any given state is the standard coin of that country. Thus the unit in terms of which value is measured in the United Kingdom is the pound sterling. But this is only one of the mediums of exchange there in use and by no means the most common. In India there is a gold standard, but the current, and almost universal medium of exchange is silver. In early mediæval England the standard money, the money of account, was the silver pound. But no silver pounds were coined, the coins were silver pence, and later, shillings. Sometimes, indeed, value is measured and payments computed in terms of some other unit than the standard coin. Thus, at one time grain rents for the use of land were common, and, it is said that they are not quite obsolete to-day. In this case rent was fixed in quarters or bushels of wheat, but money was paid over, the amount of the payment being determined by the price of the grain. The value of the use of land for a given period was estimated in grain but paid in coin or orders for coin. The unit in terms of which value is measured is not *the* medium of exchange, but in modern times at least it is *a* medium of exchange, and the value of the other mediums are determined by reference to it. A good cheque for £100 would be taken in exchange for goods, the price of which was £100, because, if necessary, a hundred sovereigns could be obtained for that cheque, and, similarly, postal orders, money orders, bills of

exchange, and token money all represent either multiples, or fractions of a pound, or both.

(3) Money as a means of Transferring Value.

This is really implied in its use as a medium of exchange. If one has assets in London and wishes to buy goods in Newcastle there must be some means of transferring the value of the goods to Newcastle as payment for the goods. This is done by sending "money," that is, a sufficient quantity of a medium of exchange. Similarly, if a broker in New York wishes to purchase goods in London he must transfer "money" to London. Either of these transactions may be effected by transferring the standard metal, and in the last resort this might be done; but, usually, the transference will be effected by sending paper for which standard money can, if the payee wishes it, be obtained. There are, however, rare occasions when it is necessary for the standard money material to be remitted. It is of the highest importance, therefore, that the money material should be portable.

(4) The Standard for Future Payments.

That money should be the standard in terms of which future payments are contracted to be made, arises out of its function as the measure of value. Very many contracts are for payments to be made in the future. Perhaps the commonest of all business contracts are those which consist in value being given *now* on condition that greater value shall be returned later. All lending, all sales on credit, are of this kind. Then contracts of service, for a fixed remuneration, or according to a scale, are common. Houses and land are leased for terms of years. Goods are bought for future delivery and payment, whether at a fixed date or periodically. Contracts to execute work to be completed at the end of a given period for a sum fixed when contract is entered into are common. And the period of such contracts sometimes covers years. Holders of stock are frequently in the position of having advanced capital on condition of receiving interest

at a fixed rate until that stock is redeemed. It is, therefore, of the utmost importance that the unit in terms of which such contracts are made shall be something the value of which is stable. For if the value of the unit itself changes, the bargain contemplated by those who entered into it is not carried out.[1] Suppose, for instance, a man contracts to let a house for twenty-one years at a rent of £100 a year. If at the end of ten years the value of a pound has risen 10 per cent., the tenant is paying and the owner receiving not what was contracted to be paid, but ten per cent more. If, on the other hand, the value of a pound has fallen ten per cent., then the tenant is paying and the owner receiving ten per cent. less than was contracted to be paid. As the value of the money material rises, prices fall. If a pound will purchase more than it formerly did then a fall of prices has taken place. On the contrary, when the value of money declines prices rise; a pound will purchase less than it would before that rise. Rises and falls in the price of commodities generally are not *caused* by changes in the value of money; they *are* changes in the value of money. Now changes in the level of prices (or what is the same thing, changes in the value of money) temporarily at least, and often for very considerable periods of time, mean that either one party to a bargain or the other suffers an injustice. If prices rise, those who receive money, *i.e.*, creditors, wage-earners and so forth, obtain a *smaller purchasing power* than they contracted to receive; if prices fall then those who pay money, *i.e.*, debtors of all kinds, give up a *greater purchasing power* than they contracted to do. In choosing a money material, therefore, it is of the utmost importance to secure that stability of value shall be one of its characteristics. Now, if the demand for a thing is assumed to be constant, its value will, as we have seen, depend upon its quantity. It is therefore very important that we should choose as money material something which is not subject to

[1] Unless, of course, they anticipate the change. It is seldom that either party to the contract will do this, probably very seldom, indeed that both or all the parties will.

great variations in quantity. This will best be secured if some commodity which is very durable is chosen; for if the whole stock of a thing tends to remain in existence the annual addition to it will form a very small fraction of the total stock; and, if the annual additions be small, the fraction which they form of the whole supply will be a diminishing one. Of all commodities, the precious metals are amongst the most durable; and this is one of the principal reasons why they have almost universally been chosen as the standard money material. We are now in a position to consider what are the qualities which a standard money material ought to possess.

The Money Material and the Coinage.

All sorts of things have been used as money: cattle, hides, leather, salt, shells, tea, and many other things; but sooner or later silver or gold, or both, have displaced other commodities from use as standard money. This is because they possess, in a higher degree than competing substances, the qualities desirable in a money material. The fittest substance for the use to which it is put has, in the process of monetary evolution, survived. What are the qualities that a material which is to be used as standard money should possess? Let us answer our own question.

(1) *The money material must have utility and, therefore, value.* It is hardly necessary to state that it must be an "economic good": its supply must be less than the demand for it. It must be something which people generally will accept for its own sake, even if it were not in use as the medium of exchange. Otherwise it would not be universally acceptable in discharge of debts. It is difficult for us to imagine a government compelling its citizens to accept in discharge of debts something having no value for any other purpose than as money, though this has sometimes occurred. Even when this happens there is nothing to compel citizens of other states to accept it; and the terms on which citizens of foreign countries will accept the money of any given

country, in payment of debts, or will exchange their own money for it, are of very great importance. The precious metals, gold and silver, have always been much prized, and though their principal use, at any rate, in the case of gold, is for currency,[1] yet they have many other uses, *e.g.*, in the production of plate, watches, jewellery, gold-leaf, for stopping teeth, decorating uniforms, and the like.

(2) *The money material must be portable.* It must have large value compared with its weight and bulk. Not only is it desirable that people should be able to carry considerable sums without much trouble, but it is equally important that the cost of transport over great distances, whether by land or water, should be small. Gold and silver are so valuable in proportion to their bulk that the cost of transporting them is trifling.

(3) *The money material must be very durable.* It must not lose its value by keeping. Gold which was used by a Roman Emperor can be used to-day. The metal does not deteriorate by keeping. It is almost impervious to the destructive forces of nature. It is hardly soluble, and it resists chemical action more than almost any metal. As has already been pointed out, this quality of durability is of very great importance. Once the precious metals have been separated out of the ore they tend to remain in existence *as metal.* Neither moth nor rust corrupts them.

(4) *The money material should be homogeneous.* One piece should be as good as another. The quality should be uniform. Wheat and butter, and leather, and, in fact, most ordinary commodities exist in grades or qualities. But gold is gold. One ounce of gold is as good as any other ounce and no better. Thus, provided coins are of equal weight and fineness of metal, one coin is exactly as good as another, which is just what is desirable. It would be very inconvenient if, when accepting payment, we had to

[1] *i.e.*, Anything which is generally accepted as a medium of exchange.

distinguish between quality 1 and quality 2 gold, or if we had to keep our eyes open for knots, or decayed pieces, or other defects in the quality of the money material.

(5) *The money material should be divisible.* Not merely should it be capable of division, but, when divided, the value of the sum of the parts should be equal to the value of the whole. If an ounce of the material is divided into four equal parts the value of each part should be one-quarter the value of the whole. Thus diamonds, which answer to most of the qualities already enumerated, would not answer as a money material, if only because to divide them is to destroy their value; divide a diamond into pieces one-fourth of its original size, and you may diminish the value of the parts to one-thousandth of that of the original whole.

(6) *It should be easily recognisable,* and should be capable of being coined. The late Professor Jevons called this quality *cognisability.* There is little difficulty in distinguishing gold and silver from other substances, and, from both, with a slight admixture of alloy for hardening purposes beautiful coins can be manufactured.

Coinage. The Standard Coins.

The original standard metal in England and, indeed, in most European countries in the early middle ages was silver. Gold came into use gradually, side by side with silver, but silver remained the standard metal in England down to 1699. From 1699 both gold and silver were standard coins in our country; that is to say, both were coined freely, and both were unlimited legal tender. There was a double, or alternative standard, and the debtor could choose whether he would pay his debts in gold or silver. For reasons presently to be explained gold gradually became the favoured currency during the eighteenth century, and in 1798 the free coinage of silver was stopped. Finally, in 1816, when the present coinage system was adopted, gold became the sole standard metal, silver coins henceforwards being in this country mere

tokens. By Peel's Coinage Act, 1816 (56 Geo. III, c. 68),[1] the English sovereign, or pound sterling, is 123·274 grains of standard gold, that is, gold of which eleven parts are pure gold and one part is alloy. But a small allowance is made for the inevitable accidents of manufacture, and coins may be issued which vary from this standard weight by not more than two-tenths of a grain. Thus the Mint cannot issue a sovereign which is less than 123·074 grains, or more than 123·474 grains in weight, standard gold. The weight of the sovereign is expressed also in the statement that twenty pounds troy weight of gold must be made into 934 sovereigns and one half-sovereign.

We can now see what is meant by the mint price of gold. For—

$$\text{20 lbs. troy, standard gold} = 934\tfrac{1}{2} \text{ sovereigns}$$

$$\text{thus one ounce} = \frac{934\frac{1}{2}}{240} = 3{\cdot}89375 \text{ sovereigns}$$

$$= £3 \text{ 17s. } 10\tfrac{1}{2}\text{d.}$$

The Mint must purchase all gold offered to it at the rate of £3 17s. 10½d. an ounce. But this only means that, by the English law, gold is coined free of charge, for, since one ounce of standard gold weighs the same as 3·89375 sovereigns, to pay for gold at the rate of £3 17s. 10½d. an ounce is merely to hand out coined gold equal in weight to the gold bullion handed in. It will be seen that, so long as the law fixing the weight of the sovereign remains unaltered, the Mint price is fixed and invariable.

In practice, however, gold bullion is not taken to the Mint, but to the Bank of England which, by law, must purchase all gold offered to it at the rate of £3 17s. 9d. an ounce. Thus the practical charge for coining amounts to 1½d. an ounce or a little more than one quarter per cent. on the value of the gold. It is open to anyone to take gold bullion to the Mint and get it coined free of charge, but, if he does so, he will have to wait for his coins. The time which he would have to wait

[1] The statute now in force is the Coinage Act, 1870, 33 Vict. c. 10, by which the then existing legislation as to the coinage was consolidated.

may be taken as twenty days and $1\frac{1}{2}$d. is the interest on £3 17s. $10\frac{1}{2}$d. for twenty days at three per cent. As the Bank pays the £3 17s. 9d. at once, the deduction merely amounts to the interest which the bullion-owner loses in any case. In fact, the owner, as it were, gets his gold discounted by taking it to the Bank. He renders it available for his use at once, instead of having to wait.

In reality, then, the Mint price of gold merely expresses the weight of the monetary unit, and there is no difficulty in the statement that the Mint price is invariable. We must remember that, when we speak of the Mint price of gold, we are talking of the value of gold in terms of gold. To say that the Mint price of gold is £3 17s. $10\frac{1}{2}$d. an ounce is exactly parallel to saying that one pound of best yellow soap is worth four cakes of best yellow soap if each cake weighs a quarter of a pound.

Can the market price of gold differ from the Mint price? Obviously if the coinage is what it purports to be, if the weight of the standard coins in circulation does not differ materially from the legal weight, if, in short, the coinage is not depreciated, then the market price cannot differ appreciably from the Mint price. No one will take less than £3 17s. 9d., for he can always get the Mint price, minus the $1\frac{1}{2}$d., from the Bank of England; no one will give more, for he can get gold at the rate of £3 17s. $10\frac{1}{2}$d. by drawing a cheque and presenting it at his bank for payment in gold, or by presenting notes at the Bank of England. In practice, the price of bullion may rise to about £3 17s. 11d. if the demand (say, for export) is pressing. The exporter who wants bar gold will sometimes pay the extra halfpenny an ounce, but if asked to give a higher premium would find it profitable to obtain and export sovereigns, and the Bank would be compelled to get bullion coined to replace those sovereigns.

Suppose, however, the sovereigns are not of the legal weight. Let us take an extreme case, and imagine that they contain only half as much gold as they should do. Then, obviously, as soon as this was generally known, sellers would

want twice as many light sovereigns for any given article as they would full-weight sovereigns. The market price of gold, in terms of the depreciated money, would be twice the Mint price and prices generally, in terms of the depreciated currency, would tend to rise ; indeed, experience shows that they would rise to a greater extent than the price of gold. The market price of gold is therefore an *index*, though not always an entirely accurate index, of *the depreciation* of the currency. If, for instance, we learn, as we shall do, that the market price of gold in England at the end of the eighteenth century and the beginning of the nineteenth varied from £4 to £5 4s. 0d. an ounce, we shall know that the currency, whatever its form, was depreciated. That is, it was worth less than its face value.

The Token Coinage. Gresham's Law.

The silver and the copper coins of the United Kingdom are mere tokens ; they pass for fractions of the pound sterling, but their face value is much above the value of the metal of which they are composed. The extent to which their face value exceeds their value as metal varies, of course, with the price of metal. A silver coin will purchase, at present, more than twice its weight of silver, a copper coin about four times its weight of copper. Token coins are necessary because, if the fractional coinage were made of standard metal they would be inconveniently small. A coin one-eighth the size of a sovereign would be bad enough ; a coin $\frac{1}{240}$th the size of a sovereign would be unspeakably impossible. Thus, if the fractional coinage is to be of convenient size it must be made of metals less valuable than the standard metal ; and if those representing the smaller fractions of the pound contained metal up to the value of that fraction they would be inconveniently large. Now to make a piece of silver really worth $\frac{1}{40}$th of a pound acquire a value of $\frac{1}{20}$th of a pound merely by coining it is obviously a very profitable transaction. Left in private hands there would be a great temptation to issue enormous quantities of tokens. Private issues of tokens would have local circulation only. The

holders would find it impossible to use them outside a small local circle. It is perfectly true that Governments have often abused their power to make profits out of token coins ; indeed, they have frequently abused the prerogative of coinage by debasing the standard money. One of the monopolies, the grant of which got the Stuart kings into such trouble, was the monopoly, granted to Court favourites, to make copper tokens. Such coins were issued in larger quantities than really required for use as small change. The issuers were not bound to redeem them. Consequently the tokens accumulated in the hands of tradesmen, who could not get rid of them, whilst they had to accept tokens or nothing in payment for goods. Indeed, people having these tokens tended to use them, on the principle of paying out the worst money in their possession. On the death of Charles I these farthings were no longer issued, the public being left without the smaller kinds of change, and having to resort to tokens issued by private individuals, thousands of different varieties being used during the reign of Charles II. Some of these had a circulation confined to a few streets in a particular town only. By bitter experience, therefore, the country has been taught the true principles of token coinage :

(1) In order that the token should be uniform and universally accepted within the state, token coinage, as well as the coinage of standard money should be a Government function.

(2) The value of the metal contained in tokens must, for convenience, be less than their face value.

(3) The issue should be limited to the proved requirements for change, this being, of course, an additional reason why the very profitable work of making token coins should not be undertaken by private persons.

(4) They should only be legal tender for a limited amount. Otherwise the temptation to counterfeit them will be very great indeed.

A consideration of the above principles may serve to ntroduce us to what is known as Gresham's Law.

Let us imagine that the gold and silver coins of England exchanged for one another at the existing rate, that twenty shillings, or eight half-crowns, exchanged, and could be used for a sovereign. Let us suppose also that silver were put, as regards coinage, on the same footing as gold; namely, that it could be coined free of charge and without limit in amount. Then any person possessing silver could double the value of his metal by getting it coined. A great deal of silver would, on these terms, very soon be coined. If silver were unlimited legal tender, that is, if the *debtor* could, at his option, compel the creditor to accept silver; then, obviously, as soon as people became aware that silver was, as bullion, only worth half its face value whilst gold was worth its full face value, they would pay silver in discharge of their debts, and would save the gold. They would be acting with strict legality, and, in fact, would only be exemplifying the general rule that where there are two ways of achieving an economic object, a cheap way, and a dear way, the cheap way will be chosen. But if they had to pay coin abroad they could not pass the silver at its face value; and they would either have to pay gold, or double the nominal price in silver. Thus gold would tend to go abroad. The overrated metal, silver, the coin which was not really worth what it purported to be, would drive the gold out of circulation. Similar results would ensue if the gold coinage were debased, or seriously worn. As soon as people found that some sovereigns were lighter than others they would tend to use the lighter ones whenever possible, whilst the full weight coins would tend to be used for export, the depreciated coins thus driving the good ones out of circulation. Such is the substance of Gresham's Law, "Bad coins drive good ones out of circulation," so called from Sir Thomas Gresham who clearly stated the proposition as early as the time of Queen Elizabeth.

It follows from this that wherever the currency is depreciated it is of no use issuing full-weight coins until the deficient coins have been withdrawn from circulation. Many attempts have been made to improve a coinage merely by

the issue of good coins. Such attempts have universally failed. The only effective method is to withdraw light or debased coins from circulation and to substitute full weight coins for them.

The reader will now be able to understand how important it is that the coinage shall be kept up to the proper standard. If worn coins are not from time to time withdrawn from circulation, people will go on using, by force of custom, coins which are really only tokens. This may have no very bad effect on home trade for some time, though, eventually, it would cause a rise of prices ; but, as the coinage became seriously deteriorated, the good coins would tend to be exported, the coinage would go from bad to worse, and the foreign exchanges (the rate at which documents payable in a foreign country in the money of that country can be purchased with English money) would go against us, that is to say, the purchasing power of a pound in foreign trade would be reduced.[1]

The Theory of General Prices.

We have already pointed out that to say that the value of money rises is the same thing as saying that prices fall ; and, similarly, that a fall in the value of money is a rise of prices. As the one *is* the other, expressed in a different form of words, the one cannot be a cause of the other. We cannot *explain* a fall of prices by saying that gold has risen in value or, as the phrase goes has *appreciated*, nor can we *explain* a rise of price by saying that gold has *depreciated*. To say that gold has depreciated is merely to say that prices have risen. It is a statement of the fact and not an explanation of it.

How then are changes in the value of money, or, what is the same thing, rises and falls in general prices to be explained ? Before answering that question it is best to explain what we mean by changes in general prices. The value of

[1] *e.g.,* Instead of a pound purchasing French goods worth 25·22 francs it would only purchase goods worth less than that sum.

money is its general purchasing power. Prices rise as the general purchasing power of money declines; they fall as the general purchasing power of money increases. It is quite possible for the price of some articles to be rising whilst the prices of most articles are declining. If, on the balance, the prices in general have gone up, so that the general purchasing power of a pound has diminished, then we say that there has been a rise in general prices. How is such a rise to be expressed? Obviously it is a matter of some difficulty. If the things I buy have not increased in price there is no rise of prices to me. Whether or not the rise of general prices affects me depends entirely upon whether my pounds will purchase smaller quantities of the goods I consume or not. Again, the prices of raw materials may change and leave the price of the finished commodity unchanged. Fluctuations in the price of raw cotton continually take place without affecting the price of calico or sewing cotton. Such difficulties cannot be entirely overcome. The economist must be content to mean by "high prices" or "low prices" very much what the man in the street means when he says "Sandhill-super-mare is a 'dear place' whilst Mudpuddle-on-the-sea, is a 'cheap place,'" or what the migratory workman means when he says his money "goes further" in one place than in another. How then are we to calculate rises and falls in general prices? In spite of criticism on details, the method of index numbers seems a practicable method of measuring changes in general prices. Suppose we want to measure the purchasing power of gold in respect of four commodities, *a*, *b*, *c*, and *d*, in a series of successive years. Let us suppose the prices of the commodities per unit to be 35s., 18s., 12s., and 25s. respectively, then the average price is $\frac{35 + 18 + 12 + 25}{4}$s. $= 22{\cdot}5$s. But suppose *a*, *b*, *c*, and *d* enter into consumption in the ratios of 5 : 2 : 3 : 1 respectively then the average will be

$$\frac{(35 \times 5) + (18 \times 2) + (12 \times 3) + 25}{11}\text{s.} = 24{\cdot}7\text{s.}$$

and, plainly, the latter is the better average,[1] for we must take into account the fact that money is spent upon the four articles in varying proportions, five units of one article being purchased where two of the second, three of the third, and only one of the last are purchased. We may now take the price 24·7s. as our standard and indicate it by the figure 100. Next year we may make a similar calculation, and if we find that prices are 2·3 per cent. higher, then our index number will be 102·3. If similar calculations are made for a series of years a table of index numbers may be constructed, which, if trustworthy, will show how prices have varied during that series of years. It is not intended here to enter into a discussion of the merits or demerits of any particular system of index numbers. Obviously, if we accept the idea that the general purchasing power of money can be shown at all by a system of averages, a proposition which we propose to take for granted, then the larger the number and the more representative the character of the commodities selected the greater the approximation of the table of index numbers to the actual facts. Numerous series of index numbers exist,[2] both in

[1] But it is an arithmetic mean. A geometric mean is better still. The above example is merely given to show the student what an index number means.

[2] As an example of a table of index numbers we may append the following from the Board of Trade Annual Abstract of Labour Statistics.

INDEX NUMBERS OF WHOLESALE PRICES OF FORTY-FIVE COMMODITIES, 1871-1908.

Prices of the year 1900 = 100.

Year.	Index No.	Year.	Index No.	Year.	Index No.	Year.	Index No.
1871	136.0	1883	126.8	1895	91.0	1907	105.7
1872	145.8	1884	114.7	1896	88.2	1908	102.8
1873	152.7	1885	107.7	1897	90.1		
1874	148.1	1886	101.6	1898	93.2		
1875	141.4	1887	99.6	1899	92.3		
1876	138.0	1888	102.7	1900	100.0		
1877	141.6	1889	104.0	1901	96.9		
1878	132.6	1890	104.0	1902	96.5		
1879	126.6	1891	107.4	1903	96.9		
1880	129.6	1892	101.8	1904	98.3		
1881	127.3	1893	100.0	1905	97.6		
1882	128.4	1894	94.2	1906	100.5		

England and in other countries, and whilst none is perfect, and each is probably open to some criticism, all of them, nevertheless, show the same broad results. No one disputes, for instance, that, to take the case of England, general prices rose from 1790 to 1810, fell from 1810 to about 1849, rose rapidly from that year onwards and remained high till 1873, fell continuously from 1873 to about 1896, and, from that date onwards, have risen steadily but slowly.

These variations in the purchasing power of money are very considerable. For instance, the general level of prices fell by some thirty per cent. between 1873 and 1896. This is a sufficiently serious matter; it meant, for instance, that those who paid in 1896 debts incurred before 1876 paid a third more wealth (or power to acquire wealth) than they bargained to do. The real charge represented by the interest on the national debt, and other fixed payments of interest was considerably increased. Again, the rise of prices since about 1896 means that creditors are receiving less than they bargained to receive. Thus we see that the money now in use in our country (and this is as true of other countries) is very far from perfect as a standard for deferred payments. It has been suggested, therefore, that contracts extending over time might be rectified by reference to an official tabular standard of value composed of index numbers of the kind we have illustrated, provided parties agreed to this course when making the contracts. This, though not ensuring perfect justice, would enable a much closer approximation thereto than is now possible, It seems doubtful, however, whether such a device would meet the needs of commerce.

How then is the value of money determined. The prevailing opinion of economists from the time of Ricardo onwards has been that the value of money, other things remaining the same, depends upon its quantity. Increase the quantity of money, and prices (that is, the general purchasing power or value in exchange of money) will tend to rise. Diminish the quantity of money, and prices will tend to fall, though other influences may, of course, to the extent

of their power, accelerate or retard the rise or the fall. This theory has been arrived at in various ways. Some have chosen an inductive method; have noted rises and falls of price, investigated their possible causes, and found that the hypothesis, which best explains those changes in the level of prices, is change in the quantity of money. Others have adopted various deductive or analytic methods. We propose to follow the latter plan.

Let us regard money as a commodity. A man who sells goods, buys money. He buys it because of its utility to him, that utility consisting of its purchasing power. But we know from experience that, other things remaining constant, the utility of any commodity diminishes with every increase in its quantity. Thus, the larger the total stock of money the less will be the value of each unit; and the value of the whole supply will tend to equal the value of the least needed unit. Thus any increase in the quantity of those things which can be used as purchasing power, or as stores of value, will diminish the value of the money material, or what is the same thing, cause prices to rise. Thus, other things being equal, the level of prices tends to vary directly with the quantity of money in circulation; and the value of money tends to vary inversely with that quantity.

If this theory be correct, we ought to find that, whenever the supply of money has increased rapidly (so that the other economic circumstances may fairly be considered to have remained constant) prices have risen. Well, America was discovered at the end of the fifteenth century, the silver mines began to be exploited early in the sixteenth. Now the average price of a quarter of wheat varied very little from 1260 to 1500, being about 5s. 10¾d. to 5s. 11¾d.; from 1540-1582 it was 13s. 10½d, and we know that this was not because wheat was scarcer or the labour producing it more inefficient.

Similarly the discovery of gold in 1849 led to the following changes in the level of prices:

Year.	Index No.	Year.	Index No.	Year.	Index. No.
1849	74	1853	95	1857	105
1850	77	1854	102	1858	91
1851	75	1855	101	1859	94
1852	78	1856	101	1860	99

There were other causes of variation, but it is difficult to believe that the whole change in the level of prices which is discernible can have no connection with the great increase in the production of gold consequent upon the gold discoveries in California (1848) and Australia (1850-51). Similarly when notes, not convertible into gold have been issued in very large quantities, prices have risen in spite of the fact that the notes were secured against property. We have seen that the mint price of gold, which, in sovereigns, should be £3 17s. 10½d. rose in 1814 to £5 4s. 0d., and the prices of all other commodities rose, probably *more* than in proportion. This was on account of the fact that in 1797 the Bank of England had been forbidden by Act of Parliament to exchange its notes for gold. The restriction was at first imposed to prevent a crisis. The Government had borrowed heavily from the Bank of England, and the Bank's stock of gold was very low. The fear of invasion, with a rumour that invasion of the North East Coast had actually taken place, led to a run on certain country banks, and these banks applied to the Bank of England for assistance. But the Bank, having a very small stock of gold, could not lend notes if those notes were convertible, inasmuch as a proportion of them would certainly have been presented to the Bank for payment in gold, and its reserve therefore further diminished. The Bank was, therefore, relieved of the obligation to give gold for its notes. It could, thus, lend freely in notes, and the knowledge of this served to put an end to the crisis. The notes remained inconvertible until 1819, when they were again made payable in gold. The only check on the amount of notes issued by the Bank during the period of restriction was, therefore, the possession of property to the value of the notes issued. This enabled the Bank to issue notes in large quantities with the

results described above. An even more striking case is provided by the issue of "*assignats*" by the French Republican Government. These were inconvertible notes purporting to represent assignments of land. Over 45,000 millions of francs' worth were issued in little more than a year, and, of these, some 36,000 millions worth were put in circulation; with the result that finally a hundred franc note was equal in purchasing power to about 3d. in coin. We see, therefore, that notes will depreciate, even if they are secured on property, unless the effect of that security is to keep the *quantity* of notes within bounds.

Now let us suppose that money circulates with greater rapidity. Let us suppose that every coin is exchanged twice as often as it formerly was. Then each coin is doing twice the work that it did. The *efficiency* of the money has doubled. Thus, an increase in the efficiency of money is tantamount to an increase in its quantity. One piece will now serve the same purpose as two formerly did. The demand for money will fall off and the value of money will diminish, *i.e.* prices will rise, in proportion to its increased rapidity of circulation. If, as we have supposed to be the case, the efficiency of money has been doubled, then prices will tend to be doubled, or alternatively, the same level of price will be maintained by half the former quantity of coin. The best illustrations of this proposition will be found when we come to see how gold substitutes have, virtually, increased the efficiency of the gold supply, and kept up prices at a far higher level than would have been possible had they not come into use.

It is necessary to note that we have said that the level of prices (or the value of money) is determined by the quantity of money available, *other things remaining constant.* But the "other things" do not remain constant. We have already noted one thing which does not, viz., the rapidity with which money circulates. Let us proceed to notice other things.

If, by any means, the number of bartering transactions is increased, then, obviously, demand for the actual money material will be less than it otherwise would be; and,

consequently, the value of money will be lower, *i.e.*, the level of prices will be higher than it otherwise would be. Thus an increase in the number of bartering transactions tends to raise prices, or what is the same thing, tends to prevent them from falling. A diminution in the amount of bartering or an increase in the number of exchanges for the actual money material will, on the contrary, tend to cause prices to fall or prevent them from rising.

Again, suppose the amount of business to be done increases faster than the amount of money with which to do it, the effect will be, of course, to increase the demand for money material, to raise the value of money, and cause the general level of prices to fall. A great increase in the productivity of the world therefore, whether caused by improvements in agriculture, manufacture or transport, the methods of dealing, or the opening up of new countries will, unless accompanied by a corresponding increase in the quantity of the medium of exchange, tend to cause a fall of prices.

There are at least two other forces which affect the level of prices. One is the use of the money material in industry. Gold, for instance, is used for many things besides coinage. The lower the value of gold, the greater the number of uses to which it can be put. If the value of gold were no greater than that of gun-metal, gold would be preferred to gun-metal for watch cases, and gold stopping would be used in dentistry where other materials are now made to serve. Thus, as prices rise, gold tends to be taken more and more into industrial uses. As prices fall it tends to go out of those uses. But to use gold in the arts is to increase the demand for gold, this will tend to raise the value of gold, and depress or check the rise of prices. Similarly as prices fall gold will tend to go out of industrial uses, the quantity available for use as money will be increased, and the fall of prices will be checked. The use of the money material for other purposes than money thus operates to check both rises and falls of price, and to keep prices steadier than they otherwise would be. Or, we may put it in this way: an increased demand for the use of

the money material for other purposes than money tends to increase the value of money or to cause a fall of prices: a diminution in such uses, by diminishing the demand, lowers the value of money or causes a rise in prices.

There is, next, the influence of the expenses of producing the money material upon the level of prices. These expenses are calculated, of course, in terms of the money material itself. If general prices rise, therefore, it means that more of the gold which the mine yields will have to be paid away in working expenses. A mine which, before the rise took place, was only just earning minimum profits, would, on the rise taking place, cease to earn such profits. A rise in general prices, therefore, will always tend to send the "marginal" mines out of operation, and thus diminish the output of gold. A fall of prices, on the other hand, inasmuch as it means an increase in the value of gold, will tend to increase the output of gold, by rendering it profitable to work the poorer mines. Thus, like the use of the money material in industry, the expenses of producing the money material act as a steadying force. Rises of price do not go so far as they otherwise would because they tend to diminish the supply of gold. Falls of price do not go so far as they otherwise would did they not stimulate new supplies of gold. The expenses of producing the money material therefore only act by affecting the supply, and thus by increasing or diminishing the quantity of money. There is a tendency, of course, for the value of gold always to equal the marginal expenses of producing gold. A rise in the expenses of producing gold, caused, let us say, by the working out of the "easier" places, would be followed by a diminution of the output; and the marginal mine left working would be that the yield of which was just sufficient to cover the expenses of producing after the rise had taken place, including the normal minimum "profits" of the entrepreneurs working the mine. But it is not the expenses of producing the gold which determines the value of the money, it is the value of the money, or the general level of prices which determines which mines shall be worked. In other words, the

ordinary law of value applies to the value of gold or other money materials. Of course, if by inventions or better organisation the expenses of mining at any given level of prices are diminished, then hitherto unprofitable ore could be worked, the gold output would be increased, and the tendency of prices would be to rise. But, owing to the great durability of gold, the influence even of any considerable improvements in the methods of producing gold would have a comparatively small influence on the total supply, and therefore on its value per unit. A considerable gold discovery, on the other hand, will have a considerable effect on prices so long as gold remains the standard money material. The rise of prices during the twentieth century is, in part, caused by the increased output of gold in South Africa and elsewhere, most of which is not due to more economical methods of working gold, but to the opening up of sources of supply hitherto unknown.

Broadly speaking, what we have propounded here is the "quantity theory" of money, which explains rises and falls in price, changes in the value of money, by changes in its quantity and "efficiency." But, as we have seen, these are not the only influences at work. There are others, and these have very great importance.

There is one final question which must be dealt with: viz., what constitutes the money, the quantity of which, other things being equal, will determine the general level of prices. This brings us to a consideration of Banking and the Credit System.

The Credit System, and Banking.

In most civilised countries, gold, though the standard metal in terms of which prices are quoted, and contracts for payment made, is no longer the ordinary medium of exchange. This is perhaps truer of our own country than of any other. The real medium of exchange in all wholesale trade, and increasingly in retail trade, consists of cheques, which, it is true, are orders for the payment of gold, which, it is equally true, are very seldom exchanged for gold. The value of the

cheques which are cancelled out against one another in the Clearing House exceeds, as we have already noted, twelve thousand millions of pounds a year, and this by no means includes all the cheques used as currency. If goods are sold for paper, and bought with paper, and paper obligations are then merely cancelled, obviously goods are, in effect, being bartered. The use of coin is being economised, and, we may consider this, either as tantamount to a great increase in the efficiency of the standard money, or as a tremendous increase in the quantity of money used as medium of exchange. In order clearly to understand this we must make a brief examination of the English Banking system.

The centre of that system, though, judged by the volume of the business done, it is no longer the largest English bank, is the Bank of England, founded through the instrumentality of William Paterson in 1694. Its present constitution is governed by the provisions of the Bank Charter Act, 1844, which is usually associated with the name of the then Prime Minister, Sir Robert Peel. Bank failures and banking crises had been somewhat frequent before the passing of that Act. This was held to be due to the lack of security that the notes issued by banks should be convertible into gold on demand. It must be remembered that, up to 1833, no joint-stock bank could issue notes within a radius of sixty-five miles from London except the Bank of England, and it had been believed that the Bank of England had a monopoly of joint-stock banking within that radius. Thus the Bank notes in existence were either those of the Bank of England or of country banks, and many of the country banks were small private firms. In order that all notes should, without question, be immediately met by a payment in gold, and thus, as was thought, the stability of banks ensured and banking crises avoided, the following provisions were made in the Bank Charter Act 1844: The issue of notes was entirely separated from all the other business of the Bank of England, the Bank being divided into the Issue Department, which was to be concerned solely with the issue of notes, and the Banking

Department in which the ordinary banking business of the Bank was to be conducted. In the Banking Department the Governor and Directors of the Bank were to have an entirely free hand. In the Issue Department their duties and liabilities were strictly defined by the Act, and their actions were to be purely ministerial ; that is to say, in the Issue Department they were to carry out the provisions of the Act without discretionary power of any kind.

It had been noticed that, in the severest crises, the circulation of Bank of England notes had never fallen below £16,000,000. Notes to this amount never having been presented for payment, it was unnecessary to provide gold to meet them. A margin of £2,000,000 was allowed and it was provided that the Bank might issue notes to the value of £14,000,000 against securities other than coin or bullion. The chief security was, and is a book debt of £11,015,000, which is owed by the British Government to the Bank. For every note issued, above the fourteen millions, the Bank must deposit actual metal to the face value of the note. Thus, before the Bank can issue a five pound note in excess of the statutory limit, it must deposit in its vaults either five sovereigns or 616·37 grains of standard gold.[1] Banks which issued notes before the passing of the Bank Charter Act were to be allowed to continue to issue them up to the average amount of their issue during the three months next before the passing of the Act. But it was provided that, should any such Bank cease to issue notes, the Bank of England should be allowed to issue, against securities and without deposit of gold, notes up to two-thirds the amount of the lapsed issue of such country banks. Many country banks have ceased to issue notes, very frequently because of their amalgamation with London or other joint-stock banks. Thus the total amount of notes issued by the Bank of England against securities other than the deposit of gold, that is, the *fiduciary* issue, is now

[1] Under the Act it may deposit one quarter of the metal required in silver ; but, as it must pay out gold if required in exchange for its notes, in practice silver is *not* deposited.

£18,450,000. Against every other note the bank has gold actually in its coffers.

It was further provided that the Bank of England should issue a weekly balance sheet. This account is made up to Wednesday evening of each week. It usually appears in the London evening papers of Thursday, and in the morning papers of Friday. The following is an example:

Bank of England

An account pursuant to the Act 7 and 8 Vict. c. 32, for the week ending on Wednesday, the 26th of July, 1911.

ISSUE DEPARTMENT

	£		£
Notes Issued . .	58,410,455	Government Debt .	11,015,100
		Other Securities .	7,434,900
		Gold Coin and Bullion	39,960,455
		Silver Bullion . .	——
	£58,410,455		£58,410,455

BANKING DEPARTMENT

	£		£
Proprietors' Capital .	14,553,000	Government Securities . . .	14,967,286
Rest . . .	3,432,262	Other Securities .	28,436,705
Public Deposits .	9,290,030	Notes . . .	29,221,135
Other Deposits .	46,524,784	Gold and Silver Coin.	1,200,893
Seven Day and Other Bills . . .	25,943		
	£73,826,019		£73,826,019

Here we see that, as against a total issue of £58,410,455 in notes, the bank held securities to the extent of £18,450,000, the rest being covered by actual deposit of gold coin or bullion. But a glance at the Banking Department balance sheet will show that notes to the value of £29,221,135 were held by the Bank itself in that Department. The gold held against these notes is, therefore, a part of the gold reserve which the Bank keeps in order to meet any unforeseen demand. As a rule, applications to the Bank for money would take the form of a demand for notes. The Bank, therefore, keeps in the Banking

Department a sufficient quantity of coin for the daily demands of business, but keeps the rest of its reserve in notes, the gold covering these notes being deposited in the Issue Department. The amount of the Bank Reserve is, therefore, always to be ascertained by adding together the value of the Notes and of the coin held in the Banking Department. But the actual reserve of gold is that gold in the Issue Department which covers the notes held in the Banking Department together with the gold and silver coin in that department. Thus, if we imagine a "run" on the Bank to take place, and the creditors of the Bank to demand payment in gold, as the till-money became exhausted the Banking Department could obtain in gold from the Issue Department £29,221,135 for the notes which it held at the date of the return we have quoted; but it could obtain no more. £10,739,320 in gold would still remain in the Issue Department and could not be obtained except in exchange for the notes in circulation. The notes in circulation, therefore, are absolutely safeguarded. They are not only as good as gold. In a sense they *are* gold. Anyone having a five pound note in his pocket can be certain that, unless the circulation of notes goes far below what it ever has been known to do in the worst crisis, there is gold in the vaults of the Bank representing the face value of his note. The reader must clearly distingush between the gold reserve and the whole of the gold in the Issue Department. The latter is always larger than the former, the gold reserve consisting, we may repeat, only of (*a*) the gold coin held in the Banking Department and (*b*) the gold in the Issue Department to the amount of the notes held in the Banking Department.

It will be seen, therefore, that English bank notes were, by the Bank Act, 1844, rendered as safe as anything in this world could be. Yet as a preventive of banking crises Peel's Act was a complete failure. A severe crisis occurred within three years after the passing of the Act, and the Bank Act itself had to be suspended in 1847 in order that the crisis might be relieved; and this occurred again in 1857 and in

1866. Since then the Bank Act has not been suspended, but there was a severe crisis in 1878, and another threatened to occur in 1890.

The reason for all this is simple. There are, as we have seen, other ways by which banks can give credit besides the issue of bank notes. Peel made it impossible for a bank unduly to extend credit in the form of notes; but he made no provision at all to restrain, by law, the creation of other forms of credit. And, at the very date of the Bank Act, and increasingly as time went on, the bank note was becoming less and less important, relatively, whilst cheques were rapidly becoming overwhelmingly *the currency* of the country. For, as soon as the Banking Law of the country was put on a proper footing, joint-stock banks were rapidly organised, and from these the present great English Banking Companies have been evolved. These banks are, and were from the beginning not Banks of Issue, but Banks of Deposit; *i.e.*, they did not issue notes, but took the deposits of customers, contracting to pay those customers on demand, in gold, and made their profits by lending as large a proportion of the deposits as they thought safe. Such lendings take the form of allowing the borrowers to draw cheques on the banks up to the amount of the loan, or the discounting of bills, or actual investment in stocks, shares, or other securities. Banks, of course, do not lend all their capital and deposits, but the more they can lend with safety, the higher their profits. They lend then as much as they think prudent; they keep the amount of till-money which they know by experience their daily business demands; they place the rest, which they call their reserve, for safe keeping with other institutions. The country bank keeps its "reserve" with its London agent. The bank-branch keeps its reserve at its head office. And these London agents and head offices of the great banks (being, of course, identical) use these reserves as *their* deposits, and keep what they do not use at the Bank of England. The Bank of England therefore becomes the depository of the unused funds of all the great banks. But the Bank of England itself does an

important banking business and uses the "reserves" which are deposited with it, just as an ordinary bank does. It lends as much as it thinks prudent, and keeps the rest in actual gold as its own reserve. Thus, the only gold reserve in the country is that at the Bank of England. It is the only basis, other than confidence, of the whole superstructure of credit by which the business of the country is carried on. In fact, it is truer to say that the solid basis is not the gold, but the confidence. For, were confidence destroyed, the actual gold reserve would probably prove very insufficient; in fact, if confidence were completely destroyed, it would be ludicrously insufficient.

We can now understand both why the Bank Charter Act, 1844, failed to prevent crises, and why, when banking crises occurred in 1847, 1857, and 1866 the Bank Act had to be suspended.

The Bank Charter Act did nothing to prevent banks of deposit lending an undue proportion of their deposits, or locking up an undue proportion of these deposits in securities which could not be immediately realised. Now banks undertake to repay their depositors either immediately, or at a very short notice. It is not sufficient, therefore, for them to be *ultimately* solvent. They must keep their resources in such a form that demands for money can be met at once. A comparatively small amount of till-money is usually sufficient for this purpose. If any unforeseen event occurred to destroy confidence in them, their till money would be insufficient to meet the demands of the depositors for cash. In such circumstances, branches apply for help to their head offices; country banks to their London agents. But these, in turn, have used their deposits freely, and can only turn for help to the organisation with which they have deposited their reserves; and the only organisation which keeps a large gold reserve is the Bank of England. When the crises we have mentioned occurred the Bank itself had lent freely, and its reserve was very low. Yet unless it could lend to those banks which needed loans, suspension of payment all round would result. The only device, therefore, which could save

the situation was to suspend the Bank Act, and allow the Bank to issue notes without deposit of gold. For, in a time of crisis, debtors will always take Bank of England notes; which is merely to say that no one believes that the Bank of England would be allowed to suspend payment. Moreover, the bank notes being legal tender, people are quite right in supposing that the notes are money which everyone will take. The Bank Act, therefore, being suspended the Bank could lend freely, and the knowledge of this was, in each case, quite sufficient to restore confidence and relieve the crisis. For the last generation, we may note, there has been no very serious banking crisis, for the Bank of England has conducted its business with great prudence; the great joint-stock banks have followed suit; and, when a crisis has been threatened through the suspension, or the threatened suspension, of a particular business, the banks have co-operated to prevent the panic which would have ensued had they not guaranteed the ultimate solvency of threatened institutions, as in the case of Baring's in 1890.

The expansion of the uncovered note issue therefore has never been required since 1873; but it might again prove the ultimate means of preventing a serious crisis. In the case of the Imperial Bank of Germany provision is made for an "automatic suspension"; for that Bank may, by law, increase its circulation of uncovered notes on payment of a tax. That Bank is, therefore, discouraged from increasing such an issue unless there is real danger, whilst there is no necessity to go through what looks to be the foolish process of suspending, as it is called, an Act, the very purpose of which was to prevent a crisis. It is plain, therefore, that all the Bank Act has done is to secure the convertibility of the Bank of England note; but it has done nothing to make the English banking system sound. That it is sound is due to the prudence of English bankers, which prudence, however, is probably the outcome of the bitter lessons of experience.

We see, further, that though the real medium of exchange in our country, and, probably, though to a smaller extent, in other

civilised countries, consists not of gold but of orders to pay gold, in other words, of credit instruments, and that, therefore, the quantity of money in circulation includes not only coin, but cheques, bills and notes, yet the quantity of such instruments in circulation is limited by the supply of gold. Bank notes are, to all intents and purposes, gold, since the quantity which can be issued in excess of £18,450,000 is rigidly limited by the amount of gold in possession of the Bank of England. But the quantity of cheques and so forth in circulation is limited by the available supply of money material, too. It is true that the vast majority of such cheques are never presented for payment in gold. We have already explained how A pays his debts to B, by ordering a banker to pay money standing to his (A's) credit at a bank to B. B pays this order in to his banker. If B's banker is also A's banker, then a mere transfer in the bank books accomplishes the transaction. If not the cheque is, as a rule, cleared. Bank X (A's bank) has now a claim upon bank Y for say £100. But it is highly probable that bank Y has a claim of a similar kind upon bank X. The representatives of the two banks meet at the Banker's Clearing House. Bank X's clerk has all the cheques drawn on Bank Y which have been paid into Bank X. Bank Y's clerk has all the cheques, drawn on Bank X, which have been paid into Bank Y. Let us suppose Bank X's claims against Bank Y amount to £10,000, and that Bank Y's claims against Bank X amount to £9,000. Then obviously the balance will be struck if Bank Y pays to Bank X £1,000, and the other obligations are all cancelled. The payment of such a balance is made by means of a cheque drawn upon the Bank of England, and this merely means that the balance of the one bank in the books of the Bank of England is reduced, and that of the other is increased by £1,000. Thus, if all cheques were cleared no gold would be used at all. But all cheques are not cleared. For the payment of wages, and for the purposes of retail trade a certain number of cheques are sure to be presented for payment in actual coin. Thus, banks cannot safely conduct their

business without what we have called the till-money. And anything which tends to increase the number of cheques drawn tends to increase the number of cheques presented for payment in gold. Now for a bank to advance money or give credit in any form is to enable someone to draw cheques who would not otherwise be able to do so. Thus the number of cheques for which gold will be demanded is increased, and, if the amount of credit is increased, the banks will have to increase the amount of gold at their disposal. But this means that the gold reserve of the Bank of England would have to be drawn upon. The banks will be loth to do this, for it is the only reserve for emergencies, and, in practice, they reduce their loans by increasing the price of such loans, that is by raising the rate of interest. Thus the quantity of paper in circulation cannot be indefinitely increased, but is limited by the stock of gold available as the basis of credit. The quantity of money, which, other things being equal, controls the level of prices, does therefore consist of credit instruments, but the quantity of credit instruments is limited by the available gold supply which, indirectly, therefore, controls the level of prices.

It must further be remembered that the level of price is not an affair local to any one state. Prices in other countries affect prices here, prices here affect prices elsewhere; and, if we make allowance for cost of transit and insurance, import duties, and like obstacles to the freedom of commerce, there will be found to be a tendency for the prices of all goods, for which there is an extended market (sometimes comprising almost the whole civilised world), to find a level. If, for instance, after allowing for charges, the principal of which are mentioned above, prices are lower in England than in the United States, England will be a good country to buy in, a bad country to sell to. America will be a good country to sell to, a bad country to buy from. Goods, therefore, will tend to go to America and money to flow into England. Our exports of goods will increase, our imports of goods diminish, whilst the opposite will occur in each case with respect to the

United States. Thus the quantity of money will increase here and diminish there; prices here will rise, and prices there will fall. Such a process is in constant operation not merely between two countries, but as between all trading countries; and its tendency to equalise prices over the whole area of trade will easily be understood. We shall again refer to this matter in connection with the subject of foreign trade. It is here mentioned to show that, except in quite isolated countries, it is not the quantity of money in use within any given state which, other things remaining constant, determines the level of prices, but the quantity of money in use over the whole area of exchange.

The Foreign Exchanges.

The device of bills of exchange as a method of settling accounts between debtors in one country and creditors in another is a very old one. The principle of the foreign exchanges is comparatively simple, and may be set out in tabular form.

Country I.		Country II.
A sells	———————→ goods value £100	to M
B buys ←	——————— goods value £100	from N

All four parties are satisfied thus:

A draws a bill on M and sells it for £100 to B. — M pays the bill to N.

↓ bill ↑ money — ↑ bill ↓ money

B buys the bill from A and remits it to N. ———→ bill — N receives the bill and presents it to M for payment.

Thus a single document can be used to settle the two purchases and sales, that document need only cross the frontier once, and no gold or silver need be used at all. In effect, the

whole transaction may be summed up by saying that B, who owes money to N, pays A ; and M, who owes money to A, pays N, and, so long as A and N, the sellers of goods, are paid, it is a matter of indifference to them by whom they are paid. In practice, however, A does not sell directly to B. He, having a document payable in Country II, would have to go round and find a merchant wanting such a document for remittance to Country II, and this would be troublesome. So intermediaries, bill brokers or foreign bankers, spring up who make a special business of buying bills from those who have them to sell (that is discounting bills) and selling the bills they have discounted to those who wish to buy them for use as remittances. Thus, in our simple example, A would discount the bill which he had drawn with a bill broker X, B would buy the bill for remittance from X and send it to N. N would either present it, when due, himself or would sell it to an intermediary, Y, who would present it to M when due. Some such bills are bills due sometime, *e.g.*, forty days, or three months, after date ; some are bills payable at sight (or cheques, which are only a species of the genus bill). Moreover, such a bill when drawn may be used as currency. N may use it to pay a debt to P, P may pay Q with it, and so forth. There may be any number of intermediaries who use the bill as a medium of exchange. Bills drawn upon good London houses are, in fact, a kind of international currency. A New York merchant buying goods from Buenos Ayres will often pay by a bill drawn upon a London house. Again, we must note that, in our illustration, A need not necessarily draw a bill for the whole £100. The same results will ensue if he draws a bill for £90, and M sends him a remittance value £10. So B instead of remitting £100, may remit £90 and allow N to draw for £10. There will be for the exports sold by merchants in Country I both bills drawn and remittances received, and similarly in Country II. But the practice will be for exporters in some countries predominantly to draw bills, for exporters in other countries predominantly to receive remittances. In the case of England about ninety per cent.

of our exports are remitted for by the foreign debtor, and about ten per cent. are drawn for by our exporters. In other words, if N receives a remittance for £90 and draws on B for £10 he may be taken to personify the British exporter.

But the transactions in our simple illustration relate to two different countries. If Country I is France, and Country II is England, and we suppose the French seller A sells to the English buyer M, quoting an English price, and is authorised to draw a bill upon M for £100 for payment, he will require to sell that bill in his own country, not for English money, but for French. The rate at which he can sell the bill for £100 for French money in Paris will be the rate of exchange upon London in Paris. So if N draws a bill for 2,500 francs on B in part payment of the debt owing to him, the rate at which he can sell that bill in London for English money will be the rate of exchange in London upon Paris. This rate will depend, in the the first place, upon the metallic value of the respective standard coins of the two countries. Now the weight of standard gold in a sovereign is the same as that which would be contained in 25·2215 francs (generally quoted as 25·22½, the ½ being, of course, ½ a centime). This is said to be the Mint Par of exchange between English and French money. The Mint Par, therefore, is determined exclusively by the legal weight and fineness of the respective standard coins of the two countries. It merely means that 2,000 sovereigns, if of legal weight, would balance 2,522 twenty franc pieces of precise legal weight, if both were put in the scales.

If we turn to the money page of a daily paper, however, we shall very seldom find that the rate of exchange in Paris for a cheque payable at sight is 25·22 francs for a pound sterling. We may, indeed, find it to be 25·15 francs, or 25·31 francs, or some other figure. Why is this? It is because the market price of bills, like that of other commodities, depends upon the quantity available in relation to the demand. If the supply in London of bills or cheques upon French banks or financial houses is large relatively to the

demand, then the holders of such bills, in order to equate the demand to the supply and sell their bills, must offer a larger number of francs for one pound than they have been doing. If the price yesterday was 25·22, but to-day the supply of such bills exceeds the demand for them at that price then the number of francs offered for a pound will have to be increased, and the exchange may rise to 25·23 or 25·27, or higher, until the point of temporary equilibrium between demand and supply is reached. If, however, starting from the same price, it is found that the demand at that price exceeds the supply then the number of francs offered for £1 will diminish, a higher price in pounds will have to be given for francs and the exchange will " fall " to fr. 25·21, fr. 25·18, fr. 25·15, or some other price which will equate demand to supply.[1] The rate of exchange, therefore, fluctuates in accordance with the relation of the demand for bills to the supply of them. How great can these fluctuations be? Let us suppose that the cost of transmitting gold from Paris to London or from London to Paris is 10 centimes. Let us further suppose that the exchange in francs for £1 sterling is rising. Obviously the rise in the rate of exchange is adverse to the Parisian who has to remit money to England. The remittance he requires is becoming dearer and dearer. If the rate rises to 25·32 it will now pay him as well to send actual gold as to buy a bill. At this point, therefore, gold will tend to flow out of France into England. In other words, the outgoing specie or gold point for France and the incoming specie point for England has been reached. Conversely, if the exchange is falling, the English buyer of a cheque on a French bank finds the document becoming dearer and dearer. £1 which would formerly purchase, say, 25·22 francs, at last

[1] The reader must be careful to grasp that a fall in the Paris exchange, say from 25·21 to 25·18 means that documents entitling folks to francs are becoming *dearer* to an English buyer, whilst a rise from 25·18 to 25·22 means that francs are becoming cheaper. A person, in London, buying bills in order to sell them again must, therefore, " buy high " and " sell low." Obviously if he can buy francs at the rate of fr. 25·22 for £1, and sell them at the rate of 25·18 for a £1 he has a margin of profit.

purchases only 25·12. At this moment it will pay him as well to send gold as to buy a cheque. Gold, therefore, at this point will tend to flow out of England into France. The outgoing gold, or specie point for England (which is the incoming gold, or specie point for France) has been reached. So long, therefore, as the currency of the countries remains undepreciated the rate of exchange, can only differ from the Mint Par of exchange by the cost of transmitting metal. The exchanges cannot rise above incoming specie point nor fall below outgoing specie point. And these points are not fixed, but depend upon the cost of transmitting coin or bullion.

If the currency of either country is depreciated, then the foreign exchanges will not fluctuate in the manner described about the Mint Par of exchange, but may vary indefinitely from it. If the English coins themselves were debased or light then the exchanges would fluctuate about a point below the Mint Par of exchange. Similarly, where a country has an inconvertible paper currency which has been issued to excess, or which is distrusted though not issued to excess, the exchanges may go against that country to any extent. The number of units of the depreciated currency which might be required in exchange for £1 sterling is without any definite limit. So, where the standard coin in one country is gold and in another is silver, if the value of either in the terms of the other varies, this will be reflected in the rates of exchange. Suppose, for instance, that at a given date £1 purchased 10 rupees in silver ; then suppose the value of silver in terms of gold is halved, that is to say £1 will, after the fall in the gold value of silver purchase twice as much silver as before, then the number of rupees exchanged for £1 will increase accordingly and the exchange will become something like £1 for 20 rupees. Something like this actually happened in the exchange with India. Owing to the fall in the value of silver, which took place after about 1873, the rupee, originally worth, in British money, about 2s. 0½d., sank to 1s. 2d., to the great loss of those whose interest, prices, or salaries were paid in rupees, whenever they had to remit to a gold-using country. The inconvenience

ultimately led to the adoption of a gold standard in India.

What has been said about the rates of exchange, so far, applies to what are called sight rates or short rates. Obviously if a document drawn in terms of the coinage of one country is purchased in another, but is not payable, say until three months after the date of purchase, the purchaser will allow for the fact that he is giving ready money or, as we say, is discounting the bill, in the price that he gives. Thus, if a bill on France due three months hence, is purchased for English money something more than the number of francs required for a bill immediately payable will be required for each £1 sterling of the price. Thus the English buyer in £1 will want for each £1, in addition to the sight rate, the discount on the bill, which, as the bill is payable in Paris, will be calculated at the French rate. This accounts for the fact that the sight rate may be quoted say at 25·16, and, on the same day the long rate (say for three months) may be 25·38. The long rate will probably include, besides interest, the cost of a stamp, and, in some cases, a small allowance for risk. Thus the long rate is based upon the sight rate, and though important from the practical point of view, does not raise any important matter of principle which need be referred to here.

There are two questions, however, which are of importance from the point of view of the student of economic principles. The first is the part played by the foreign exchanges in the maintenance of equilibrium between the imports into and the exports from a state. This subject will be best dealt with when we come to the theory of foreign trade. The second, which we may deal with at once is the relation between the foreign exchanges, the gold reserve of the Bank of England, and the money market.

It has already been explained above, that, although the commercial currency of our country consists of cheques and not of coin, yet the whole system of paying by cheque is based upon the maintenance of a sufficient reserve of actual gold.

After all, every cheque is an order for payment in gold, and the payee can insist on having gold if he demands it. Moreover, the banks must pay their depositors in gold if they are required to do so. It is of the greatest importance, therefore, that gold shall be available in time of need. We have already noted that each bank only keeps sufficient till-money for its daily needs ; and that the only *reserve* of gold is that gold in the Issue Department of the Bank of England which covers the notes held by the Banking Department, together with the coin in the Banking Department. Now England is the chief, if not the only, free market for gold in the civilised world. That is to say, anyone who has money standing to his credit with a bank or other financial house in England can ask for payment in gold and can export that gold, if he pleases, without let or hindrance. Thus, whoever wants gold comes to England for it, and "withdrawals of gold for abroad" are one of the commonest events in the financial world. Such a withdrawal, however, must reduce the stock of gold in the Bank of England, and therefore diminish the only reserve available for banking institutions in this country. Gold goes out of England for all sorts of purposes ; one country buys it in order to replenish its coinage ; another in order to have a basis for an issue of notes ; it may be bought for manufacturing purposes ; but, and this is the most important cause of withdrawals, *gold will begin to leave England whenever bills upon London become so plentiful abroad that the rate of exchange goes against us until the outgoing specie point is reached.* Obviously if the supply of bills upon London in foreign countries is greater than the demand for them the price of £1 sterling in terms of the foreign currency will fall. If it falls to specie point the foreign creditor who holds a bill upon London, instead of selling his bill for francs, dollars, or marks, in his own country will cause the actual gold to be remitted to him. Thus, as the exchanges fall towards our outgoing specie point, it becomes incumbent on the Bank to defend its stock of gold. This it does by raising its rate of discount ; for, as the rate of discount in London rises, it

becomes more and more profitable to buy bills upon London houses, the demand for such bills therefore increases, and the rate of exchange begins to turn in our favour.[1]

If the process continues the exchanges will rise above Mint Par and may mount to the incoming specie point. At any rate there will no longer be any inducement to the foreign creditor of our English firm to send for gold rather than draw his bill and sell it in his own country; and the danger of withdrawal on account of the demand for English bills being less than the supply will have been met. An unfavourable or low exchange, therefore, is usually accompanied or followed by a high rate of discount in London. This means that all those who borrow in London will have to pay comparatively high rates of interest, and this in turn means a check of smaller or larger dimensions to business. The money market, which consists of all those who hold the loanable funds of the country, *i.e.*, chiefly the great London banks, together with those who want loans, or who wish to get bills discounted, that is the great mass of merchants, dealers on the stock exchange and other exchanges, bill brokers, and the like, are interested in the rate of exchange between England and the principal foreign countries. For the rate of exchange is at once the index and, to some

[1] When the rate at which foreign money is paid for £1 sterling exceeds Mint par the exchange is said to be "*favourable*." When it is below Mint par it is said to be "unfavourable" to this country. The words "advantageous" and "disadvantageous," "for" and "against" are used in the same sense. Thus if Mint par with France is £1 = 25·22 francs, with Germany is £1 = 20·43 marks, with the United States is 4·86 dollars, then favourable exchanges would be 25·30 fr., 20·47 mk., 4·88 dollars; and 25·16 fr., 20·37 mk., 4·85 dollars would be unfavourable or against us. This terminology survives from the time when it was thought a good thing that our exports of goods should exceed our imports so that there would be a balance payable to our country in coin. In such a state of trade the demand for bills upon London to be used as remittances by foreign buyers would be greater than the supply, and the exchange therefore high. The use of the words "favourable," "for," and so on, to indicate exchanges above Mint par, is justified to-day because such exchanges are favourable to English buyers of bills, and because the gold reserve at such a time is likely to be increased rather than diminished.

extent, the consequence of the condition of the gold reserve, and, therefore, of the "price of money." For by the price or value of money, the City man means the rate at which loans can be obtained. He is a buyer or a seller of credit; and the rate of interest is the price of the commodity in which he deals.

We have now finished our survey of the machinery of exchange and may turn to the principles underlying the production of goods.

CHAPTER IX

PRODUCTION

We have now to consider the production of wealth. We have already noticed that the requisites of production are three: Land, or better, Nature; Labour, or better, the efforts of mankind; and Capital. Now the volume of production will depend upon how these agents are used, or, as it is commonly put, upon the organisation of production. The organisation of industry and commerce must, as we have pointed out, be based upon exchange; the greater the facilities of all kinds for the exchange of goods and services, the better the possible organisation of production. But improvements in the facilities for exchange are not always the cause of improvement in production. Improvements in production often bring about improvements in the means of exchange. Each in its turn is a cause, each an effect. Freedom to exchange, however, is an essential to progress in production. To improve manufacturing processes, or agricultural methods, or the means of transport, whilst placing obstacles to freedom of exchange is, at least from the purely economic standpoint, transparent folly. For, from the purely economic standpoint, the problem of production is: how to get the maximum amount of wealth with the relatively smallest expenditure of human effort. No man, we may put it briefly, ought to achieve any result except by the easiest possible means. This does not mean that lazin ss is good; it does not mean that, within proper limits, people should not work to the best of their powers. It merely means that they should apply all their powers in the best possible way. The economic ideal of production is not a morally low one; it is a high one; for it is based upon an abhorrence of waste, and especially waste of the most valuable of all social assets, human effort and energy. The more easily things are produced, the more

leisure will humanity have, at any given level of material well-being, for the development of its social, æsthetic, moral, and spiritual sides so far as these are not developed in process of its daily toil.

All the principles of production can be summed up into a single sentence: *Things ought to be produced by the people and in the places best fitted for their production.* This maxim assumes the existence of free exchange. Thus it is necessary for us at the outset to examine how the principle of free exchange affects productive power.

Let us consider a single example. Let us suppose that A is the head of a great engineering works which he manages with supreme ability, that he is fond of digging in his garden, and has great physical strength, so that he can do the rough work of his garden better than the gardener himself. Is he, because he can do the gardening work better than his gardener, to insist upon doing it himself? Obviously not. The most productive arrangement will be, not that he shall dig because he can dig better than his gardener or his gardener's labourer, but that he shall do the work which he can do still better than digging, work which, indeed, the gardener could not possibly do. In other words, he will not necessarily follow an occupation because he has an absolute advantage in that occupation over another, but he will follow that trade for which his relative advantage is greatest. If this is true of two persons it remains true of any number.

A, B, C, D, E, F are citizens. A may be superior to all others in every trade. He is actually a baker, but he would have made a better smith than B, a better miller than C, a better tailor than D and so forth; but, if his superiority is greatest as a baker then the most advantageous arrangement for himself and for society will be that he shall pursue the trade in which his superiority is relatively greatest. And so for each member of the society. B may not only be a better smith than C, but a better miller, too. If, however, he chooses to be miller, then C must be smith, an occupation in which C is much inferior to B. Thus each member of society must,

if production is to reach the maximum, follow the occupation, not necessarily for which he is *best* fitted, but that in which his relative advantage is greatest. For in this way the total product of the efforts of society will be greatest, and therefore the exchange value of each man's product highest. And it is this force, the fact that, under conditions of free exchange, it will be to each person's advantage to engage in the occupation for which he is, relatively to all other occupations, fittest, which renders free exchange the basis of all efforts for maximising production. Under conditions of free exchange goods will tend to be produced by the people and in the places best fitted for their production. That is to say, free exchange is the condition precedent to the best possible division of labour.

Division of Labour.

Of modern writers Adam Smith was the first to point out the advantage to production of division of labour. But one form or another of division of labour has been present in all societies at all times of which we have any account. Even in the hunting and pastoral stages of society there existed division of employments, as, for instance, between men and women. As soon as the use of money is introduced town life becomes possible, and the crafts begin to separate themselves out with some definiteness. The next stage is the sub-division of employments and of particular processes. This development was well advanced by the beginnings of modern times; and specialisation is now carried to very great lengths indeed. When processes are sub-divided the productiveness of any given number of workers is multiplied, it may be, a thousand fold and sometimes more. Adam Smith's famous illustration, derived from the making of pins, may still be taken as typical. He pointed out that an untrained person, working by himself, probably could not make one pin in a day, and certainly could not make twenty. Pin-making, in his day, involved eighteen different processes; but so great was the advantage of sub-division of the employment that ten men, each

performing only one or two processes could produce some 48,000 pins in a day, that is to say, the production of each worker might be considered to be 4,800 pins.

Three reasons why such an increase of productiveness results were given by Adam Smith. (1) Increase of dexterity; (2) Saving of time lost in moving from one employment to another. (3) The fact that increase of dexterity leads to the reduction of operations to a routine; and that routine operations are just those which can be carried out by machinery, division of labour thus resulting in the invention of machinery.

Of these three reasons the last is by far the most important, and its importance has been increased indefinitely by the application of *power* to machinery. The productive advantage of division of labour has, in many trades, been multiplied a thousand times since Adam Smith wrote, simply because power, water-power, steam-power, gas, or electrical-power, has been applied to replace and save the mere muscular efforts of humanity. And the processes, both of applying mechanical devices to routine operations and of applying either new sources of power or old sources in new ways, are still in active operation. Illustrations abound. In fact they are the commonplaces of general information. The typical industrial machinery of to-day differs as much from that of 1776 as modern battleships do from the fleets of Byng and Hawke. Not until the spinning jenny was invented in 1764 could more threads than two be spun at the same time. Now, in a single "mule" frame, there are often 1,100 or more spindles, and a pair of these machines, working, of course, at an almost infinitely greater speed than the old spinning wheel, turns out some 1,700 lbs. of middle weight yarn in a week. Similarly, whilst the old hand-loom weaver had laboriously to throw his shuttle by hand, and, even after the invention of the flying shuttle by Kay, was dependent upon his own muscular power applied by a treadle, in the modern power loom the shuttle is thrown some 200 to 400 times a minute, whilst a single weaver (man or woman) often attends to four looms. The transport industries, too, provide

supreme examples of the multiplication of the productive power of mankind. The reader should amuse himself by endeavouring to make an arithmetic comparison between the productive capacity of labou ers employed in pack-horse transport and, say, those handling a standard goods train of sixty vehicles. And modern grain milling, boot and shoemaking, and, indeed, almost all modern industry, including agriculture, provide first-rate examples both of subdivision of processes and its inevitable modern corollary, labour-saving machinery.

The fact, therefore, that division of labour and the use of labour-saving machinery increases the output of wealth and economises human effort is undoubted. Modern developments of this kind are, however, often attacked (1) because they are alleged to have made work monotonous, and to have reduced craftsmen to the level of machine-minders and thus impaired the all-round development of the workers; (2) by the comparatively uneducated of all classes, because the use of machinery "throws people out of employment." Completely to meet the first objection would need more space than we can afford. We may outline the arguments as follows, therefore:

(*a*) Machinery has very much lessened the amount of uninteresting mechanical labour. Hand-loom weaving, planing timber by hand, "striking" for a smith, converting cast-iron to wrought by hammering, and similar processes were as monotonous as any modern machine-minding and far more laborious.

(*b*) The use of machinery has enabled the general standard of comfort to be raised, and has increased leisure, probably among all classes. It has enabled western society to command the means and the time for a certain amount of culture. It is only because society is now more productive that the great educational systems of western countries, which are slowly raising the whole level of culture, are possible. It is for the same reason that the length of the working day has slowly been diminishing whilst the rate of

wages, viewed over considerable periods, has slowly risen; and holidays for almost the whole working population have become possible.

(*c*) It is power machinery and modern industrial organisation which has enabled so great an increase in the *variety* of consumption to be possible. And this, taking consumption not only in the more material meaning of consumption of food, dress, and so forth, but in its qualitative meaning, consumption of drama, music, literature, and the fine arts generally.

(*d*) It is only in the lower branches of manufacturing labour that work consists of mere machine-minding or of monotonous mechanical work. The skilled man of to-day does not, it is true, require so thorough a knowledge of one particular trade as his grandfather did. He requires general mechanical knowledge and skill; a good fitter can work on a locomotive, on electrical, or textile machinery, or on the construction of a marine engine, or an internal combustion engine. He is less specialised and has a *wider* outlook than his forerunners. Similar facts are true in other trades. Thus the modern textile worker has work, which is no more monotonous than that of his predecessor, though it calls for greater energy, alertness, and intelligence.

On the other hand, of course, there is, undoubtedly, much monotonous and unintelligent labour required to-day. Who, if he could avoid it, would spend his days working a lift, or opening and shutting doors on the Underground. It is, however, very questionable whether the percentage of monotonous and unintelligent employment is greater now than in the "golden" middle age. There is always a tendency to draw entrancing pictures of a bygone time. We must remember that there was much sweating, much shoddy work in the middle ages; whilst the conditions of work, especially for women and children, were often cruel; and the environment of the worker unhealthy, his outlook narrow, and his experience small. Certainly the conditions of work to-day compare very favourably with those of the eighteenth century,

about which our information is fairly thorough. We must conclude that machinery is, on the whole, a great benefit to mankind, though the benefit is probably very unequally distributed ; and it is important to remember that machinery, like wealth itself, should be the servant, and not the master of mankind.

The second criticism is a more or less complete fallacy. It is perfectly true that the introduction of a labour-saving device often immediately causes some workers to lose their employment, and, therefore, their income. But, if the new machinery is employed to save labour and increases the output, then the increased output can only be disposed of by a lowering of price. Moreover, the lowered expenses of production, if permanent, are bound, under competitive conditions, to result in the article being offered at a lower price. People will get their cloth, let us say, at a low price, and, either they will buy more of it, or they will have spare funds to spend on other things. Thus the demand for labour may not be diminished even in the trade concerned, and certainly will not be diminished in the aggregate. Indeed, as the fund out of which wages are paid, the national dividend, is the produce of industry, it is highly probable that as the use of machinery increases that dividend, the demand for labour *of the kind needed* under the changing industrial conditions, will increase. And that such increased demand occurs is historically true. The only reason why forty-five millions of people can live within the comparatively restricted area of the United Kingdom, is that they have made their efforts very productive by the aid of labour-saving devices. Abolish machinery and we should be thrown into poverty at once. To resist industrial progress is to resist the *possibility* of improving the economic position of the workers. The proper policy is to convert the possibility into an accomplished fact.

This is all very true, but we have also to remember that an industrial change may sometimes result in the almost complete unemployment of certain *classes* of workmen. Is it possible, for instance, that, at least the older hansom

cabmen have become drivers of power-driven cabs? If not, what has happened to them? If industrial changes were quite sudden, catastrophe might come upon whole classes of labourers, under existing conditions. But even industrial changes which are called "revolutions" are spread out over years; and it seems probable that it is new labour which is diverted into the new employments rather than the old, which is suddenly dispensed with.

Nevertheless a civilised society must see that industrial changes, which will be beneficial to society at large, are not paid for by individuals suffering loss and degradation through no demerit of their own. And we must, in this respect, face the possibility of losses of capital as well as losses of employment. The way in which a truly civilised society would safeguard itself and its members in these matters does not fall within the scope of an elementary work, and is, indeed, beset with all kinds of difficulties; but we may note that the establishment of Labour Exchanges and schemes of Unemployment Insurance are at least a recognition of the social responsibility we have mentioned.

Large Scale Production.

Division of labour, with its inevitable accompaniment, the invention of labour-saving devices, would not of themselves have resulted in the existing industrial organisation. For they have operated since the beginnings of history, in civilisations comprising town populations, quite comparable in numbers, and, probably, in quality, with those of recent times. What distinguishes the period from the so-called Industrial Revolution (which was really a rapid evolution) onwards, is the application of new forms of power to machinery. This led to the concentration of workpeople into factories where the power could economically be applied; and it has led to the conduct of industry on a large scale.

The chief advantages of large scale production appear to be:

(1) Division of labour can be carried to the most profitable limits. Where boots, for instance, are turned out by the thousand pairs, the work can be sub-divided and specialised to an extent impossible where the product is only to be counted by units or even by dozens. As a consequence of this, expensive machinery can be fully employed. To have a machine stopped is to have capital lying idle. Most machinery, if it is to be profitably employed, must be kept running continuously throughout the working day and all the year round. (There are exceptions to this generalisation, especially in agriculture.)

(2) Businesses conducted on a large scale can, usually, better afford to scrap old machinery and employ the latest if it is the best, than can small businesses.

(3) Large businesses have great commercial advantages, being able both to buy on a large scale, and to sell on a large scale. They can thus, in some cases, buy and sell at rather lower prices than competitors, though, of course, they will not sell at lower than existing market prices, unless to increase their turnover. Perhaps a more important aspect of this matter is that they have, as a rule, great economic staying power. Their greater resources often enable them to choose the best times for buying, and for selling, and to tide over times of commercial misfortune better than smaller concerns.

(4) They are enabled to give full employment to persons of special skill, designers, chemists, and experimental workers and thinkers generally.

(5) The supplementary costs of the business, such as the cost of management and so forth, are spread over a large output; and so are the cost (or the interest upon the cost, or the depreciation) of buildings, power, and the like.

In many cases all these advantages can be secured in what, to-day, is considered a middle-sized works. But many firms secure great advantages of a commercial, rather than a manufacturing kind by combining with allied businesses so as to be completely self-contained; for example, some of the

great shipbuilding firms have amalgamated with firms producing steel, machinery, and guns, and can often produce either a mercantile "liner" or a battleship without going outside their own organisation for materials, or for designing ability of any order. The actual manufacturing advantages of producing upon a gigantic scale are, perhaps, best seen in works engaged upon the production of materials in their more elementary stages, *e.g.*, crude iron and steel.

The small man has some advantages. (1) He can give personal at ention to the details of his business. Thus businesses which depend upon the exercise of unusual skill by a single person must always be small. Portrait painting, even high-class tailoring, must inevitably be conducted on a very small scale. (2) He works in his own personal interests, and, whatever the stimulative devices adopted by large scale firms, they are served by managers who have not quite the same motive for sustained exertion as the "small" entrepreneur who takes both the risks and the rewards. (3) There are few trade secrets, and though the small man cannot organise a special intelligence branch, technical information, and market and general commercial news, are now made generally available in trade journals and ordinary newspapers. Thus he is under no very great disadvantages in these respects. (4) Special skill such as that of designers of all kinds, of architects and engineers, designers of fabrics, etc., can be purchased, since such workers often conduct thriving, independent businesses. Similarly the small man can generally find a market for "waste" products. Thus he is under no great disadvantage in these respects.

In fact we must conceive of industry and commerce as very finely graded. We must picture them as a series, commencing with the businesses which can only be carried on by individuals, such as the doctor, barrister, professional singer, sculptor, some tailors, some dressmakers, and the like, up through small retail businesses, small miscellaneous manufacturing businesses, to those great works engaged in producing staple commodities in tremendous quantities, or commodities, the

capital cost of which per unit runs into millions, such as very large ships, great buildings, bridges, docks and harbours, reservoirs, and very large constructional works of all kinds, or in supplying, say, all the needs of a great railway company like the works at Crewe, Swindon, or Derby.

The Forms of Organisation for Production.

The evolution of industry, chiefly during the last 130 years, has brought about many changes in the forms under which production is organised. We may consider these first according to the mode in which managing power and capital are supplied.

(1) There are *businesses owned and managed* by *individuals.* Probably, at least down to the middle of the nineteenth century, this was the typical form of business organisation. A single person owned most of the capital employed and managed the business himself.

(2) Secondly, we get *partnerships.* Sons and brothers are brought in as partners by the original founder of a business. Or two or more persons join together, one supplying capital, another managing ability or new ideas; and such small groups work together as partners dividing responsibilities and sharing profits on all kinds of terms.

(3) *Joint-stock companies.* Here we get the capital supplied, usually, by a comparatively large number of shareholders. The management is provided (*a*) by a Board of Directors; (*b*) by paid managers and officials with every variety of title and duty. As a rule, the Directors control general policy, the managing staff control all routine business, solve day to day difficulties, and perform executive work generally; though Directors are often greatly influenced in general policy by able managers. The economic advantages of the company form of organisation are, in some respects, very great. People with comparatively small amounts of capital can invest in shares sums quite inadequate for the conduct of separate enterprises. Thus, in the aggregate, immense masses of capital, which, apart from company enterprise might lie unused, become available

for production. Moreover, the amounts of capital required for many modern businesses, especially, for instance, in the transport trades, could not be raised except in the form of share capital. No one in the world is rich enough to organise, with his own capital, a London and North Western Railway Company. The various Company Acts, therefore, by giving companies a status as legal persons, and by limiting the liability of the shareholders for the debts of the company to the amount of their holdings in shares, and thus facilitating the formation of companies, have, on the balance, been of great service to the community. For large businesses the company form of organisation is now almost universal.

(4) An increasingly important form of business organisation is provided by *Co-operative Societies*, which are really special varieties of company organisation. There are (*a*) Societies of Consumers, the so-called Distributive Societies; (*b*) Societies of producers, the so-called Productive Societies.

(*a*). The Societies of Consumers are composed of members who must be shareholders, the minimum holding being usually either £1 or £2. These members organise retail shops at which they deal, being charged the ordinary trade prices for their purchases. On making each purchase they receive tokens to the amount of that purchase. At the end of the half year each member hands in his accumulated tokens, which form an automatic record of his total purchases for the half year. The dividend is then, in due course, declared at so much in the pound on the amount of the members' purchases. Thus profits are divided, not in proportion to the capital held, but in proportion to the purchases made by each member. Dividend upon purchase is the vital principle of these societies. As a rule, interest is paid upon capital at a *fixed* rate, and the members can, if they like, leave their dividends to accumulate as capital. As a rule, entry to such a society is facilitated by enabling the would-be

member to pay a shilling or so for a book of rules, deal with the society, and leave his dividends to accumulate until he possesses the minimum holding. Thus people who do not possess a single pound of capital may become members. The management is provided by a Board of Directors, elected by the members, each member having one, and only one, vote; and by a Secretary, or Manager, or both, with a subordinate staff. Thus, the form of organisation is essentially the company form in its most democratic variety. The various co-operative societies have organised a Co-operative Wholesale Society, with immense warehouses in Manchester and London. This Wholesale Society stands to the retail Societies very much as the retail Societies do to their members. It not only acts as wholesale dealer to the individual retail Societies, but conducts manufacture, and even shipping on a considerable scale. The device of dividend upon purchase rather than upon capital has proved to have very great attractions for the fairly well-to-do artisan class in great manufacturing towns, especially in Lancashire and Yorkshire, but also in other industrial centres. The Societies require for success, however, a stable non-migratory population. This is illustrated by the fact that Co-operation flourishes in the London area only in such neighbourhoods as Woolwich and Stratford, where a great Arsenal and a railway works are, respectively, to be found. It will be observed that there is nothing, in principle, to prevent the membership of such societies becoming universal, and the profits of enterprise, after payment for managing ability at the market rate, and interest on capital at a fixed rate, being divided amongst consumers in proportion to their consumption.

(*b*) The Societies of Producers consist of bodies of workers organising production primarily in their own interests. Sometimes they own the capital with which they work; sometimes they trade with borrowed capital. The management is usually provided by a directorate

or a manager, frequently elected on a democratic basis by the whole body of workers. The workers are usually paid the ordinary rate of wages, and the profit is divided amongst them (or the loss suffered by them) in some proportion to their rates of wages. This form of co-operation has not, on the whole, been anything like so successful as that already described. Disciplinary difficulties occur, capital cannot be so easily provided, and commercial, as distinguished from technical manufacturing experience is not always at the command of such an organisation. There has been, however, recently, something of a revival of this form of co-operation. And nearly all profit-sharing schemes are based, wholly or partly, upon the principle of the associations of producers. It will be noticed that these organisations are sectional. If we assume either form of co-operation to become ubiquitous, then under a *régime* of societies of consumers industry would be organised in the interests of the whole community, the individuals benefiting in proportion to their consumption. Under a *régime* of societies of producers each trade would be organised in the interests of that trade.

(5) We have to notice that industry and commerce are to some extent carried on as state enterprises, either by central or municipal governments. The principal nationally organised industries in the United Kingdom are the manufacture of war-ships, weapons, ammunition and clothing, together with the various post office activities, including the carriage of letters and parcels, the provision of telegraph and telephone services, and the Post Office Savings Banks. In many countries the railways are a national service. In the United Kingdom the supreme management of such industries is vested, as a rule, in the Crown, acting through a Minister of State, whilst the Civil Service provides the skilled administrative officials of all grades.

The principal municipal businesses other than the provision of paving, lighting, police, the various public health

services, the maintenance of street surfaces and the provision of sewers and main drains all of which are, of course, productive services of the highest value, are the manufacture or supply of gas, electric power and light, tramways, education (paid for partly out of the central exchequer), libraries, baths, wash-houses, parks and open spaces, and "working-class" dwellings. In these cases the management is provided by a Committee of some local governing body such as a Borough or County Council; whilst the executive staff consists of the municipal Civil Service working under such a Committee.

It will be seen that in many respects the organisation of the national and municipal services is parallel with that of the limited liability company. The difference comes in with regard to ownership of capital, the destination of the "profits," if any, and the objects with which the services are organised.

The question as to how far state or municipal services should, if at all, be extended is controversial, and a discussion of it is out of place here.

So far, we have discussed forms of industrial organisation mainly from the point of view of the legal character of the industrial entity and the forms of management appropriate to each. Let us notice some other typical forms of business, particularly with a view to describing modern tendencies.

(1) In the retail trade we have, of course, the ordinary shop-keeper's business. But typical of retail developments in great urban centres are the various *Stores*. These may be of the "universal provider" type engaging on a very large scale in retail business of almost all kinds. Such businesses deal in almost anything "from a pin to an elephant." They are only possible in capital cities like London and the half-dozen greater provincial towns, though they frequently do a large business in suburbs and extra-suburban areas owing to the recent great improvements in local transport.

A more dangerous form of competition with the ordinary "shop-keeper" is the *Multiple Shop*. In this case some central organisation, usually a joint-stock company, provides

branch shops distributed, in some cases, over a great city, in other cases over the whole country. The operation of such an organisation does not depend upon the existence of some great densely populated area. It can be made almost, if not quite, ubiquitous. Any place, big enough to support an ordinary retail shop, can support a branch of the multiple shop organisation. Moreover, the character and methods of each branch can be made to suit the particular environment in which it is established. The trades in which this movement has hitherto been most successful are the provision of restaurants, the retail tea and provision trades, the boot and shoe trade, and the retail chemists and druggists with suitable subsidiary activities, and the business of distributing newspapers, magazines, and books, also with suitable subsidiary commodities. Sometimes manufacturing firms successfully organise a retail trade through the agency of the multiple shop. Probably few industrial movements have greater significance than this.

(2) Transport tends more and more to be carried on on a very large scale. This applies both to railway and sea transport, and, in a lesser degree, to local transport, as exemplified by tramway and omnibus business as well as parcel delivery. The reader should be careful to remember, however, that small scale transport still exists. It is, for instance, exemplified by a local carrier in a Middlesex village who, making his nightly journey to London, competes quite successfully with the Post Office and three railway companies. And this seems an appropriate place to remark that modern changes in business organisation of all kinds are but characteristic and general. They are not exclusive. No form of business organisation (and few methods of production) ever, apparently, become entirely obsolete. The hand-loom still finds profitable employment even in England, and the village bootmaker successfully defies the competition of the best equipped factory on earth.

(3) In Manufacture we have at least three modes in which the tendency to large scale production shows itself:

(*a*) There are many cases of large businesses manufacturing only one variety of goods. An extreme case may be taken as illustration. There is a great factory which makes nothing but "news" paper, purchasing even the brown paper and packing material which the business demands.

(*b*) There are very large firms, engaged principally in the production of one commodity, but a commodity of the so-called "finished" or "fully manufactured type." These firms undertake that manufacture in all its stages. Such are the firms, or groups of firms, which produce a finished liner, and manufacture all its immensely complicated parts from the raw steel to the completed vessel, including the machinery, or most of it.[1]

(*c*) There are other firms engaged in the production of one commodity, but producing all or most of the materials requisite for the provision of that commodity. Thus, the Great Western Railway Company exists to provide transport for people and goods. But the company itself manufactures and repairs rolling stock of every kind. It often provides and always keeps in repair its own permanent way, manufactures gas, and almost everything required by its business, even to artificial limbs. It is, therefore, to a very large extent, a self-contained organisation.

(4) Finally, we have to notice the existing and comparatively recent tendency of great businesses to amalgamate into organisations either under working agreements, or in the form of kartels, trusts, pools, syndicates, or combination, of one variety or another.

These combinations are typical of modern commercial and industrial movements in all the great civilised western states, especially in North America, Germany, the United Kingdom, and, to a smaller degree, in France. The

[1] But not usually the ship's furniture, bedding, etc.

associations formed are of every degree of rigidity and completeness. It must be remembered, for instance, that all the great English railway companies are the result of the amalgamations of many smaller companies whose identity is completely merged into that of the unit so formed. So the greater joint-stock banks of to-day are the product of a process of amalgamation with, and complete absorption of, smaller banks.

The use of the word trust arises from the typical American process of amalgamation where a number of companies combined by the shareholders assigning their shares to a board of trustees, receiving, in return, certificates of their interest in the "trust" thus formed. A trust, therefore, usually means an organisation in which, whether the names of the separate businesses out of which it is formed are retained or not, the amalgamation is worked as a single institution trading with a single capital and governed by a single directorate. Kartels and working agreements are usually looser amalgamations in which the identity of the constitutent firms is retained, and each concern is separately managed, but agreements are arrived at as to prices, output, spheres of business, or some, or all of these. Thus, whatever the form of such amalgamation, the object is generally to replace competition, as far as possible, by co-operation, and to obtain as complete a control of the production and sale of the commodities dealt in as is possible. Another object is to lower working expenses, either by reducing managing costs or by doing away with unnecessary duplication of offices, machinery, or any hitherto wastefully used factor of production ; and, frequently, great savings have been effected in advertising, agency, and canvassing charges and the like. Thus, in principle, the movement for amalgamation, has, from the social point of view, both advantages and disadvantages. In so far as it does away with futile and wasteful competition, involving unnecessary multiplication of work, these combinations afford possibilities of great social gain. In so much as they give a control of production

and sale, more or less completely monopolistic in character, they are a fruitful source of danger to the community, and they may, and sometimes have resulted in the spoliation of society in general for the enrichment of a comparative few. It is the growth of industrial and commercial combinations which may result in economists having to replace their general theory of value and price based upon the existence of fairly free competition, by the theory of monopoly value based upon the absence of fairly free competition. The trust movement is, perhaps, most prominent in the United States, but in greater or less degree it exists in our own country in the iron and steel industries (including the pig-iron, heavy steel and shipbuilding, the engineering, tin-plate, steel rail, tube and other branches), in mining and other extractive industries, in many branches of the textile trades (*e.g.*, in the production of sewing cotton and the calico printing and dyeing trades), in the great chemical industries, in the milling, tobacco and brewing industries in certain branches of ocean transport, and in numerous miscellaneous trades. In the case of railways, many of which were from the very necessities of their construction at least partial monopolies, the State has already considerable powers of control, including power to fix fares and rates of carriage. And, if combinations become more characteristic forms of organisation than they now are, then regulation in the interest of consumers, that is, of the whole public, will become more frequent and thorough than it now is.

Diminishing, Constant, and Increasing Returns.

We have seen that, in agriculture, once the more fertile areas have been put into cultivation, increasing amounts of capital and labour can only be used on any given area with the prospect of a diminished *rate* of return. This, of course, assumes that agricultural knowledge remains at the same level. For any extension of the power of man to overcome the resistance which nature offers to his efforts tends to defer the

operation of the law of diminishing returns; and doubtless that operation has been, and will again be deferred. Nevertheless, the law itself is valid, for at any given level of knowledge it always does and will tend to operate. A similar law probably applies to such industries as fishing, even sea-fishing. The number of trawlers in the North Sea cannot be indefinitely increased without there occurring, sooner or later, a diminution in the normal number of herrings caught per steam-ton employed in the trade. This is quite consistent with the fact that increasing efficiency in fishing *matériel* may, for the present, be accompanied by a more than proportionate increase in the numbers of fish caught. For just as an increasing return is possible, for a time, in agriculture, so it may be possible for a time in fishing, and its operation may also be deferred. But the tendency, in the present condition of knowledge seems inevitable; indeed, inquiry by Royal Commission has already been directed to ascertaining whether it does not already operate. And the effects of employing more capital and labour in seal fishing have been almost to destroy the fisheries. Fresh water fisheries are obviously subject to the law, and a "close time" is necessary to prevent the consequences of its unregulated operation.

A rather different tendency is visible in mining, quarrying, and other extractive industries. Here, obviously, the tendency is not for the returns to diminish, but for them to disappear. And, the faster minerals are extracted, the sooner the disappearance takes place.

Now in manufacture and commerce it is quite possible for the return to increase in some proportion to the intensity of man's efforts. By division of labour, co-operation, the harnessing of power, by widening the area of exchange, by the increase of intelligence, trustworthiness, knowledge, and skill, it often happens that the larger the scale of industry the greater the return to each unit of productive power (*i.e.*, of labour associated with the appropriate forms of capital). Thus, a manufacturing and commercial nation can increase its population and its product per head at the same time.

This is especially the case whilst there are still vast areas in the world inadequately peopled and imperfectly tilled, so that their produce can be multiplied and profitably exchanged for the foods and services produced in densely peopled areas. Those industries, therefore, in which raw material plays a comparatively small part and ingenuity, skill, and power of organisation a large one can be carried on, without visible limits, under a law of increasing returns. A little consideration will show that many industries, in England, for instance, could not be carried on except in the midst of a population at once numerous and concentrated. An elaborately organised railway works in which ten thousand men work, may require for its existence a town of forty thousand inhabitants, and, as some quondam village, or little market town is converted into a manufacturing town, the general level of the inhabitants' wealth increases instead of diminishing. Ten thousand men cannot profitably engage in agriculture on an area of one square mile ; but ten thousand men can and do profitably produce locomotives, or electrical machinery, or steel ships on that area.

In fact, we have to conceive of the production of wealth, as of all the ordinary business of mankind, as a fight by men against nature. In the extractive industries the niggardliness of nature cannot be overcome. In manufacture and transport, nature can, as it were, be more and more successfully harnessed to the servic› of mankind ; and the limit to the profitable employment of labour and capital, in those industries where the value of the raw material used is low as compared with the value of the final product, is the limit imposed by human ingenuity, capacity, and foresight only.

In some industries, as, for instance, the textiles, the return possibly tends to be constant. Here, as the volume of productive force increases, the returns neither increase nor diminish but remain the same. Once a certain degree of size necessary for the efficient organisation of the industry has been attained, the returns, which, up to that point have increased, begin not to diminish but to maintain a level.

Increasing amounts of capital and labour can be used with profit and used, apparently, indefinitely, without either increasing or diminishing the return per unit of capital and labour applied in the industry. Such industries are said to be carried on under a law of *constant returns*.

We have already pointed out that in our country during the last century or so population has increased in the most striking fashion, whilst the general level of wealth has increased also. The incomes of almost all classes have increased, though not, of course, in equal measure. This is because the productive power of our country has increased faster than the population. And from the strictly economic point of view, so long as this remains the case (and there are no present signs that it is not the case[1]) a growth of population is a good and not an evil thing. Those who would remedy existing poverty and unemployment by diminishing the numbers of the people misunderstand the problem. Reduce the numbers of the people, so as to render the efficient organisation of large scale industry and transport difficult, and production per head would inevitably diminish; and, the methods of distribution remaining the same, both rich and poor would be poorer than they now are. There are, apparently, no grounds for supposing that a diminution in the numbers of the most prosperous civilised western nations would be accompanied by any increase in their wealth per head.

From an economic point of view, therefore, it is highly important that a nation should, as a whole, have its industries carried on under conditions of increasing returns. We have seen that the fundamental conditions which enable capital and labour to be directed into the most profitable arrangement are based upon free exchange, accompanied by an adequate division of labour and appropriate forms of business organisation. For, under these conditions, the

[1] Most of the current assertions as to the physical and intellectual degeneration of the English people seem to be without sufficient basis of fact. So far as we are enabled to judge, the people of to-day are physically and intellectually, and probably morally superior as a whole, to what they have ever been.

organisers of industry will, in order to secure the best results from the agents used, tend to cause each form of capacity to be used in the direction in which, relatively to all other directions, it is most productive. Thus the supply of land and labour, and capital, will tend to be used for the purposes and in the quantities which are most *economical, i.e.,* which give the greatest result for, relatively, the least effort.

If this is to ensue, however, two other conditions which we have implied but not specifically mentioned must be observed. There must be a proper localisation of industry, and care must be taken that the men and women who form the labour supply are of the most efficient kind.

Localisation of Industry.

Division of labour means not only that goods should be produced by the people best able to produce them and under the best organisation of the agents of production, but that they shall be produced in the places best fitted for their production. Division of labour, if it is to be effective, must be territorial. This proposition is, indeed, implied in the very idea of division of labour. The history of the progress of mankind on the economic side is very largely the history of the growth of localisation in industries. At the Norman Conquest almost every manor in the country was nearly (though never quite) self-sufficing. A mid-African village is very nearly self-sufficing to-day. An increasing local specialisation of industry with the correlated widening of the circle of exchange, is one of the most fundamental conditions of successful production. A village, or town, or country, or nation, which insists on supplying all its own needs is simply wasting its resources, gaining things with difficulty which it could gain with comparative ease, in short, acting in as uneconomical a fashion as it can do. All this is implied in Adam Smith's proposition that *Division of Labour is limited by the market.*

We have already shown that wide markets depend upon easy transport. But easy transport will be created when the

demand for it arises from concentrated industry, and the existence of the easy transport will, in turn, render further concentration possible. Thus these two forces react on one another, and the result is increasing territorial division of labour, with markets ever increasing in area, and ever widening circles of exchange.

Such are the general causes of industrial localisation. What are the more particular causes? The most important are natural, and have to do with climate, soil, situation, the presence or absence of minerals and other raw material, the presence of harbours, the position of rivers, and so forth. Examples are among the commonplaces of geography.

(1) Climate, Soil, and other Natural Causes. In agriculture these are paramount. In the United States we get a wheat belt and a cotton belt. In Europe there are well-defined northern limits to "wine growing," whilst special varieties of wine can only be produced in given areas. Similarly Kent and certain portions of the Severn Valley are the principal centres for hop and fruit culture in England. In manufacture climate is generally of less importance than the accessibility of cheap power and raw materials. The moist climate of Lancashire is second in importance to the proximity of coal as a determinant of the industries of Lancashire. In fact, presence upon or proximity to a coal-field is, in very many English industries, the most important factor in localisation of industry. The great engineering and textile industries, and shipbuilding tend to be carried on, upon, or near coal-fields. Iron and steel smelting are carried on where supplies of ore are present or can easily be obtained. The proximity to actual deposits of ore is now of less importance than proximity to fuel and to ports, through which ores can be imported, and heavy iron and steel exported. This is one reason why Wales and Middlesbrough have become more important centres of iron and steel production than the Midlands, and why, in Wales, metal works are being moved nearer to the ports. So in the wool trade. Historical reasons can be found for its

situation in Yorkshire and the West of England in the suitability of those areas for sheep-rearing, just as the hosiery trade in Leicester and Nottingham can be similarly accounted for by similar historical causes. But those trades now survive on imported raw material, partly because of the accessibility of cheap fuel, and partly by the tendency to industrial inertia to which we shall presently advert. Geographical position and the general geographical character of a country are very important. The fact that the British Isles are in the centre of the land hemisphere has been of great importance in developing its commerce. A country in such a situation, with a long coast-line and good harbours, was bound to become an important maritime nation, just as its ocean trading was bound to be preceded by the development of a fishing industry and a coasting trade. The importance of natural causes in determining the localisation of industries can hardly be over-estimated. Here we can but skim the surface of the subject. The reader would do well to consider his local industries and try to ascertain how far the causes of their existence are to be attributed to the control of climate, soil, the presence of minerals, geographical position (*e.g.*, especially in the case of ports, railway junctions) and how far to other causes, some of which we will now enumerate. The causes of the localisation of pottery trades in Staffordshire, the chair and brush industries in Buckinghamshire, the chemical trades in Cheshire and Lancashire, are specially interesting.

(2) Industries have often been planted in particular localities as a result of the immigration of people. Sometimes such immigration was due to an enlightened ruler of a backward country, as was the case when French and Flemish artisans were imported by William the Conqueror and Edward the Third; sometimes it was the result of open doors, as was the case with the Huguenot immigration into England in the seventeenth century, and with the gradual influx of aliens, more recently, into this and other countries.

(3) Where an industry is once well established, whether for natural or other reasons, there it tends to remain, even after the original reasons for its establishment have long passed away. It is difficult and costly to remove or abandon expensive fixed capital. Where an industry has been long established there will be a local supply of skilled labour, nurtured in an appropriate industrial atmosphere, possessing an industrial tradition. Those born in such an atmosphere may not possess the so-called "hereditary skill," but they are brought up in, and are unconsciously or subconsciously affected by an environment which has taken long to create, which, moreover, cannot easily be created anew. In such a neighbourhood there is a keen appreciation of proper skill, a knowledge of trade finish ; and this not only helps to produce a quality of workmanship formidable in competition, but renders the likelihood of invention and improvement great. There is a widespread "sensitised intelligence" among all classes of workers which at once appreciates the practicability or otherwise of ideas. It is largely the existence of such an environment which enables Lancashire for instance to more than hold its own in a trade conducted at a distance of thousands of miles both from the supply of raw material and from its principal markets ; and enables Yorkshire cloth to penetrate into the most highly "protected" markets.

Further, the existence of such an "atmosphere" renders it possible for a rapid transfer of capital and labour into allied branches of industry to take place, when the staple trade or some form of it becomes less suited to the neighbourhood. Thus, Coventry can transform itself from a silk ribbon town into a bicycle-making, light engineering centre ; thence develop the automobile industry, and grow, rather than diminish in size, as its staple trade relatively declines. So Luton and the surrounding parts of Bedfordshire, originally the home of the straw hat trade because of the quality of the local straw, adapts itself to the use of imported straw and straw-plait and prospers under the change.

(4) Auxiliary trades are almost certain to spring up in the neighbourhood of staple trades. Where spinning (with the processes preliminary thereto) and weaving are the staple trades we are almost certain to find such trades as bleaching, dyeing, and colour printing. Where there is a staple trade, the machinery used in that trade is likely (especially if the neighbourhood is supplied with cheap fuel) to be manufactured in the same neighbourhood. Hardly a cotton town is without its engineering shop in which textile machinery is manufactured. Oldham and Bolton contain not only the largest number of spindles of any two towns in the world, but some of the most important manufactories of textile machinery. In fact, the machinery used in Lancashire and Yorkshire is almost exclusively manufactured in those counties. Agricultural centres like Gainsborough, Ipswich, and Rochester are famous for the manufacture of agricultural machinery, and so are Nottingham and Leicester for lace and hosiery machinery. And where there is a great demand for one class of machinery, and fuel is cheap, the transition to general engineering is easy. Thus Manchester, and Salford, and Leeds manufacture locomotives and stationary engines, and do mechanical engineering of all kinds, and, on the Clyde, shipbuilding and the manufacture of marine engines is accompanied by the manufacture of railway and power engines of all kinds ; the same is true of Newcastle, Gateshead, and the Yorkshire towns. This tends to overcome one of the evils of over-specialisation in the industries of a district : the fact that, where most industries are of one kind, a temporary failure in demand for the goods produced is likely to be followed by great distress. Further, in districts where the staple trades are men's trades, and there is, for a time, therefore, little extra-domestic demand for women's labour, that labour, being cheap, attracts women's industries, which, once established, tend to remain. Thus, in one great railway town formerly almost exclusively devoted to the manufacture of rolling-stock and permanent way

appliances, clothing factories, celluloid works, and so forth, have been established and employ the women. Similarly at Preston, a weaving town, where, in the textile factories, there is more work for women than men, electrical engineering on a large scale has been established. In this way not only auxiliary trades, but what we may term compensatory trades are attracted to the neighbourhood of staple trades.

(5) Finally, we have to notice that certain trades are inevitably to be found in capital cities. As a rule, the Civil Service of a state, comprising, in modern times, all kinds of administrative activities will be there centred. The legal business of a country will, much of it, there be carried on. It will be the court and fashionable centre, and therefore the centre for dressmaking, millinery, tailoring, the jewellery, goldsmith's and silversmith's trades. It will be the centre for the production of newspapers, and all kinds of periodicals and magazines. It is likely to be the art centre, and, therefore, the centre of industrial arts and crafts, including the furniture and house decoration trades. It will be the centre of the dramatic and musical arts. It will probably be the most important centre of the building trade. As it is not only the newspaper centre, but the literary and scientific, and one of the most important educational centres, it is certain to be an important centre, if not the most important centre, for the printing and bookbinding trades (though in the case of London there has been a tendency for printing to migrate to towns not far distant from London). It will be the centre of the railway system and, especially if it is a port, a great centre of the entrepôt and distributive business. It is also likely to be the centre of the banking and finance businesses, the stock exchange, and an important centre of wholesale markets, and the most important shopping centre. Moreover, it will have a centripetal tendency upon industry. Trades will be drawn to it by virtue of its very size; and it seems as if this tendency is quickened as it grows. The larger a capital or other great city becomes, the larger it is likely to become,

People are apt to regard our own capital as a great commercial centre and to forget that it is the greatest manufacturing city in the world. Outside the textile manufactures and shipbuilding it probably exceeds any other place not merely in the aggregate of its total manufacturing activity, but in its output of most varieties of commodities.

Before leaving this subject we have to notice the influence of transport. Transport appears to act in both directions. It tends to centralise and to decentralise. The existence of a great staple like the cotton trade in Lancashire depends upon the fact that it costs far less per unit of weight to bring a cargo or raw cotton from Galveston to Liverpool than to transport it from Liverpool to Oldham, that the cost of sending cotton cloth from Liverpool to Bombay is small compared with that of sending it from Blackburn to Birmingham. But improvement of transport has also made it easier for some industries to move out of towns where rents and money wages are likely to be high. We have already noted the tendency of printing works to move to such places as Aylesbury and various towns in the home counties. Similar forces are at work in other trades; and the reader who considers the development of a ring of towns within a circuit of fifty miles round London, and the rather less extensive areas round the greater provincial towns like Manchester, Glasgow, Birmingham, Edinburgh, and Leeds will find a force at work, not so much decentralising existing establishments, as causing the new growths to take place rather in suburban, or extra suburban areas than in the great towns themselves. The census of 1911 provides a striking evidence of this tendency. Moreover, ease of transport has allowed great manufactures to be established deliberately; to be planted as Alexander the Great or Charlemagne planted great cities, though with less regard to purely natural advantages than these potentates were compelled to have. We have railway companies deliberately creating communities like those at Crewe, Swindon, and Eastleigh. Bournville, Port Sunlight, Saltaire, and the like are examples of the action of individuals. And, in some

cases, advantage is taken of facilities of communication to create pleasant, and well-planned "garden" towns which shall attract industry without destroying amenity.

Further, new methods of generating power may have profound effects on both the localisation and the organisation of industry. We can but hint, here, at the possibilities of the application of water power to the production of electricity, which may shift the centres of industry to the sources of such power (though a tremendous force of industrial inertia would have to be overcome), or which may result in such power being distributed to existing centres. It may, again, confirm the existing large scale factory organisation of industry; or, though this seems less likely, it may, by enabling power to be delivered in a small scale, cause a reversion to domestic industry. What, again, are the possiblities of the new methods of locomotion based upon the use of internal combustion engines, or accumulated electric power? No man can foresee or foretell. But the thoughtful student, remembering the vital character of the supply of power, and how changes in the mode of obtaining power have influenced industry in the past will survey such matters with alert and curious interest.

The Efficiency of Labour.

We have seen that industry can be maintained, in some regions of the world, upon a basis of increasing returns, or, at least, of undiminishing returns, whereby, as population grows, the business of getting a living becomes easier, or, at the worst, not more difficult, provided an appropriate organisation of production is observed. This organisation must be based upon a proper size of the industrial unit, a proper subdivision of processes, and an appropriate geographical distribution of industry. But the most important of all the bases upon which successful organisation rests is the strength and health, mental, moral, and physical, of the people who form the labour supply. The present industrial organisation of the more prosperous parts of the United States or Canada, or

Australia, of Germany, France, or the United Kingdom would not be possible in a region inhabited by Bushmen or Ashantis. So long as any section of mankind remains on a low plane of intelligence, so long will the niggardliness of nature remain triumphant. The reason why the industries of western nations, and particularly our own, can compete against those of comparatively undeveloped industrial peoples, even when those peoples have the advantage of modern power machinery and accessible raw materials, is that such peoples have not, for physical, intellectual, or moral reasons, or some, or all of these, the same working capacity. When they have it their labour will no longer be low paid. Lancashire and Massachusetts compete successfully against Bombay because the western worker can manage four looms to the eastern worker's one. It is, therefore, of the highest importance, from the purely economic point of view, that a nation should take steps to see that the population (that is *itself* taken unit by unit) is constantly in process of improvement; for this is the surest way of promoting productive capacity.

This is, perhaps, not the place to point out how the moral qualities of a race may be sustained and even improved. It must suffice to say that moral qualities, such as truthfulness, courage, determination, resourcefulness, enterprise, are as important for the production of wealth, and especially for the creation of those utilities which the sane and temperate desire, as they are in any other department of life. We may pass on to consider briefly those things which affect favourably or adversely the physical and intellectual qualities of a people so far as they are relevant to the production of wealth.

I. The Physical Condition of the Population.

(1) Of the larger influences which determine the physical condition of a people, *race and climate* are the two greatest. Of these, climate appears to be the more important. It is true that, among European races, the Teutonic appears to be physically superior, at least in size and muscular strength, to the Latin, though not, perhaps, to the Slavs. It is true

also that the European races generally appear to be physically superior, again in size and strength, though possibly not in vigour and endurance, to the Asiatic races, including those of the Mongolian type. The influence of race also is to be seen in a comparison between the Mohammedan and the Hindu races in India. The Jews present an example of the survival of race characteristics under variations of climate and other environment. But the importance of these race characteristics can well be exaggerated; and they seem to be susceptible of considerable variations when made subject to a change of climate, continued over long periods of time, and accompanied by the almost inevitable changes of food incident to a change of climate.

Broadly speaking, climate is the more important determinant. Great physical efficiency is not consistent with extremes of heat and cold. And it is significant that nearly, if not quite, all the great civilisations, which have at once been progressive and long continued, have existed in the temperate zones, principally, of course, in the north temperate zone. Certainly the most physically efficient as well as the most generally progressive nations, including the Japanese, exist in the colder temperate regions. And our own climate, which is such as to evolve a physically efficient race having, prior to the Industrial Revolution, to work harder to gain a modest livelihood than peoples of milder regions, a climate, which, seldom, if ever, necessitates an absolute cessation of work on a single day of the year or hour of the day, is not a little responsible for our comparative economic success.

(2) *Food.* The industrial army, like the army of Napoleon, marches upon its stomach. If work, requiring sometimes great, and nearly always continuous physical effort, is to be accomplished, nutritious food in proper quantities is a prime requisite. It is possible that the amount of food required by the grown worker has been exaggerated; though the ills of over-eating are more common among the sedentary part of the population, who still, by tradition, feed much as their open-air ancestors did, than among the manual working classes.

The great mass of agricultural labourers, the general labourers, and the less well paid craftsmen probably cannot for financial reasons over-eat. And such workers as iron and steel smelters, puddlers, rollers, navvies, boiler-makers and rivetters, and those who follow other arduous trades cannot over-eat. But the true importance of food in connection with physique is to be seen in connection with the new supplies of labour. Comparisons between the physique of children in "poor" elementary schools and children of the same ages in public schools have been made, and have displayed the most alarming differences in physique between the well and the ill-nurtured elements of our race. The nation which allows its children to grow up less physically capable than, properly nurtured, they would be, may, it is true, be improving as compared with past time, but it is, nevertheless, failing to lay adequate foundations for future improvements in productive power; and it may be sapping the very foundations of its prosperity. It is for this reason that the real livelihood (not necessarily the money income) of the family ought to be forced up sufficiently to provide for the physical efficiency of the growing labour supply, and thus for its future general efficiency.

(3) *Another condition of physical efficiency is leisure, rest, and change.* These are vital necessities; and allied to them are the need of freedom and hope. It is the necessity for freedom, aspiration and progress which distinguishes the requisites for the physical efficiency of human beings from those which apply to the whole animal kingdom. It is considerations of this kind which lie at the basis of the factory codes and other legislative regulations of hours and conditions of industry which are now, though, of course, in varying effectiveness and completeness, almost universal in the civilised industrial world. Perhaps the most striking advances of civilisation during the last century and a quarter have been seen in the shorter hours, the improved industrial conditions, the longer holidays, and the facilities for change and the reasonable employment of leisure which, though still lamentably

deficient at some industrial levels, are, nevertheless, more widely diffused than they probably ever were. In this connection we have always to remember that wealth is created for man, not man for the production of wealth. If the increasing productiveness of industry does not result in the increased *diffusion* of amenity and culture, then that such an increase is evil and not good is, to put it at the lowest, at least arguable.

(4) *Occupation* is a factor in physical efficiency. A man is what he does. It is probable that the occupations requiring mere physical strength are diminishing in importance, and that watchfulness, intelligence, and promptitude with a certain amount of versatility are, and will be, much more important attributes of the labourer. Nevertheless, to do some quite easy operation repeatedly and continuously, for some hours at a stretch, requires more physical strength than sedentary people, who have never tried it, would imagine. Many modern occupations require endurance of this kind. And, as a basis for the moral and mental qualities a sound physique, endowed with a strong nervous system, will, perhaps, always be a fundamental condition of industrial success. Occupations which result in positive poisoning, or which induce malformations in the young are, or ought to be, if not prohibited, regulated by the State so as to remove their dangerous features; and all the most important industrial nations have taken long steps in this direction. We may instance the power of our own Home Office to issue regulations for "dangerous" trades, and to prohibit or regulate the use of very dangerous or poisonous raw materials.

(5) *Town and Country life; general environment.* It is argued that town life does not and rural life does promote physical efficiency. This is too sweeping. The environment provided by the more crowded areas and the slums of towns leads to the development of a lower kind of physique than does rural life even when accompanied, as it often is, by poverty. But slums are not inevitable concomitants of urban life. Where urban life is lived, not necessarily under sumptuous conditions, but in the enjoyment of a necessary minimum

of house accommodation and fresh air, the town product is at least physically comparable to that of the country area. Civilised man has always, hitherto, lived in towns, though he is now beginning to live chiefly in suburbs. In fact the very term civilisation implies town life. As the earnings of agricultural labour are, and are likely in this country, to remain low ; as, indeed, a population as large as our own, must be mainly urban, the proper, and only possible method by which to ensure a physically efficient race is to make towns healthy. This by Public Health and similar legislation, and by manifold municipal and voluntary efforts, is gradually being accomplished. In the newer towns and some extensions of the old ones, both in this country and abroad, the major mistakes which occurred during the rapid urbanisation of England between 1780 and 1848 are being to some extent avoided.

II. The Intellectual Condition of the Population.

In all industry, intellectual as well as physical, efficiency is required ; and the importance of intelligence and moral qualities in the labourer is certainly not diminishing. We have already pointed out that a very backward race could not possibly take advantage of the Western European methods of production. Such people would require long training to perform the most " unskilled " mechanical operations in our factories ; and there is much work, above the lowest grade, in most manufactures which very few members of such races could be taught to perform at all. There is, of course, hardly any work which is entirely unintelligent and unskilled. Such terms are quite relative. Now the greater the skill and intelligence of the population the greater the chance that it will secure a comparatively large output of wealth with a comparatively small effort. This is the economic ideal. That efforts should not be misdirected, that work should be as effective as possible, is no low ideal either. To attain it the population needs training. This training may either be general or special.

By a general education we mean one rather directed to the development of man's faculties, mental, moral, spiritual, and intellectual, than to the development of any particular skill. Nevertheless, it is important to note that general education and special technical training are not mutually exclusive terms. For in the course of a general education the teacher must teach, and the learner learn *something*, and, as a rule, the learner must learn by *doing*. Hence a general education must, by the very nature of things, be at least in part technical. Latin prose and Greek verse are to the learner purely technical studies; and are, often, deliberately taught and learnt with no other intention than teaching or acquiring a technique. In elementary education arithmetic and English composition are, and to a certain extent must be, technical acquirements. It is only when we come, both in elementary and secondary education, to history, and sometimes to geography, that we get to the purely culture-studies; and every experienced teacher knows, whether he admits it or not, that it is precisely in these subjects that his teaching is least successful. A class of boys or girls of sixteen in a modern secondary school of the best type will know the technique of elementary mathematics and French grammar thoroughly: their ignorance both of the facts and the significance of history and geography will amaze any well-informed man. No one is to blame for this. Children can learn and practise technicalities for themselves. They cannot exercise themselves in history and geography; they can learn French by speaking it and writing it; but they cannot learn history by making it, and are too immature to appreciate its problems by reference to those of to-day.

So that, whilst undoubtedly there should be education for education's sake, we need not worry too much if that education is directed to some practical end. In all probability, it seems to the present writer, education would be more fruitful if it were much more frankly utilitarian up to the extreme limit of school age, say up to eighteen or nineteen. Thenceforwards those going into the higher branches of very

highly technical work must, of course, receive technical training; but a large culture element should enter into their training; whilst the actual manual workers should continue their education, once they have arrived at man or womanhood, on lines something approaching an exclusive attention to culture.

As this is not an educational treatise we may, having made the above remarks, at once proceed to summarise the educational essentials to a highly efficient organisation of the resources of a nation for production.

(1) The whole population must receive a sound elementary education, involving the teaching, implicit as well as explicit, of discipline, cleanliness, the chief laws of health. The training should open the door to culture as teaching to read, calculate, observe, and infer do; but there is no objection to its being given, according to neighbourhood or circumstances, an industrial bias. Such an educative period should be extended as the prosperity of a nation grows, and should be regarded as a training of all sides of the growing human being. Special care should be taken of the physical growth of the children, and the education should take place as far as possible amid healthful surroundings.

(2) There must be definite technical training of all grades. This may take place either during the actual conduct of business, by way of apprenticeship, or pupilage, or it may take place in technical schools of various grades, or in universities. Or these methods may be combined. In fact, the training received outside the actual conduct of business, whether industrial, commercial, or professional, must, in a sense, always be preliminary. It is true that, for instance, a doctor nowadays receives the whole of his formal training before he commences to practice, and is never, or very seldom, the professed pupil of a practising physician or surgeon. Nevertheless, he never arrives at his full degree of skill until he has entered for himself upon the business of preventing and "curing" disease. A solicitor usually

begins practical business at the outset of his pupilage, but he, nevertheless, must study, as well as practise, either privately, or at a school of law, if he wishes to qualify properly for entry to his profession. And so with all the highly skilled trades. The engineer pupil must have training in the actual conduct of his business and theoretical scientific training, too. One of these may precede the other, or both may be pursued at the same time, but neither can be safely neglected. In the more thickly occupied levels of industry scientific study, as distinguished from actual practice, was formerly too much neglected. But few artisans are now entirely without the vestiges of an elementary scientific training gained outside the actual pursuit of their trade for pay. And, as the general understanding of mechanical processes of all kinds is rapidly becoming far more important, relatively, than special but narrow manual skill, independent scientific training, having special reference to some group of industries, is becoming essential to the creation of a properly equipped working population in all but the very lowest grades. The smaller the number of people employed in the lowest grades the better, not merely from the point of view of productiveness, but from the standpoint of humanity. Formerly, apprenticeship was the rule in nearly all relatively skilled manual crafts. Now, it is the exception. Hence the need for technical instruction. In supplying this need, our own country, for a generation behind some other nations like the German Empire and the United States, is now, except, perhaps, in definite commercial training, not much, if at all, behindhand.

Our ideal should be to have no members of our community not relatively skilled in the production of some utilities, including under that term not merely the products of the ordinary industrial and commercial arts, but the domestic humane, and æsthetic arts, too.

It is, therefore, of the highest importance that training should be as widespread and as easily attainable as is possible. No surer source of national deterioration, from the merely

economic point of view, exists than the neglect of such training, whether it occurs by non-provision of proper educational facilities, or by allowing youth to drift into occupations, like newspaper-selling, errand-running, or that of "van boy," which require no skill, and lead up to no life-occupation. A nation which spends its resources generously and wisely, whether out of taxation, or immediately from the pockets of parents or employers, upon training, is making the best investment of capital that can be made. For an intelligent and highly skilled population will always be able to supply goods which are needed, which, relatively to the products of less skilled people, will be of high value. We need not trouble ourselves lest skill and intelligence shall become too widespread. To level up the general range of intelligence and skill, to break down the artificial barriers which prevent ability finding its appropriate outlet, will tend to level down the quasi-rents which some occupations enjoy. But those who have to deal with large numbers of young people well know that high intelligence and executive capacity will never become relatively common. Nature, unfortunately, seems to have seen to that.

CHAPTER X

INTERNATIONAL TRADE

INTERNATIONAL trade is best viewed as a branch of production. The study of production consists of a consideration of the means best taken by the people of a country to supply themselves with goods. One of those means is the purchase of goods from the people of other nations, the purchase being, in modern times, made for money. But, as we shall show, if our people purchase goods abroad other nations must inevitably purchase goods from our people. In effect, though not in form, the process will be one of exchange of goods. We obtain the goods we import by producing goods for export. The principles of foreign trade, therefore, are merely a particular application of the fundamental principles of economical production. Goods are most economically produced when their production is undertaken by the people, and in the places, best fitted for producing them. And, if this principle is to be observed, freedom of exchange must be preserved. This freedom of exchange is in no way inconsistent with the regulation of production in the interests of the health and well-being of those engaged in it, nor with the regulation of sale with a view to the prevention of fraud, adulteration or immorality. We may well prevent people selling poisons promiscuously, or selling adulterated foods, or goods by false description. We may prevent people working unduly long hours or under unhealthy conditions. But, if we prevent our people from buying cloth, or soap, tinned meat or automobiles merely because they were not made within our own political boundaries, then, by failing to observe the principles of free exchange, as already explained,[1] we are merely employing our capital and labour a little less productively than we might have done.

[1] See pp. 157-159.

If we take as our unit of productive power a day's work by one man using £100 of fixed capital, then, if 500 yards of cloth costs us x units whilst we could obtain exactly the same quantity and quality of cloth by exchanging for it a machine costing us $x - 1$ units to make, then we shall simply waste one such unit if we insist on making the cloth for ourselves. Where the absolute cost to us of making a commodity is greater than that of making the commodity which we could exchange for it the gain to us by the exchange is obvious. And the vast majority of the goods our people purchase from the people of other nations consists of goods which cost us less to buy than to produce, or else of goods which we do not produce at all. And a like proposition is, of course, as true of the trade of other nations as of our own. But, just as it pays a man to buy goods which he could make more cheaply himself, provided he can purchase those goods by something he can make more cheaply still, so it may pay the people of one nation to import things which it could make more cheaply than the people of the nation from which they are imported. For people to insist upon making all the goods which they can make at a lower absolute money cost than that at which such goods can be purchased abroad may mean to give up some form of production in which they have a greater advantage still, and thus to divert capital and labour into a less profitable employment than is necessary, and, to that extent, to become poorer.

It is worth while to show this in arithmetic detail. Let us suppose that there are two nations, A and B, and that each can produce goods which we will call g^1 and g^2. Let us further suppose that one hundred units of productive power in A can produce indifferently either 50 units of g^1 or 100 units of g^2, whilst, in country B, 100 units of its productive power can produce 45 g^1 or 63 g^2. This we may set out in tabular form thus:

One hundred units of productive power in
country A produces 50 g^1 or 100 g^2.
" B " 45 g^1 or 63 g^2.

Thus A has an absolute advantage in producing both g^1 and g^2. But in producing g^2 it has a greater advantage over country B than it has in producing g^1, for whilst its power of producing g^1 is as 50 : 45 or 100 : 90 its power of producing g^2 is as 100 to 63. In other words, the expense of producing g^2 is relatively, or comparatively less than that of producing g^1. Thus, productive power in country A will be maximised if it devotes all its energy to the production of g^2, and purchases whatever quantity it wants of g^1 with g^2. This is an illustration of what is called the doctrine of comparative cost. And, if exchange be free, the inhabitants of each country will, in seeking their own largest gains, be driven into the occupations in which their labour, as compared with all other occupations, is most remunerative. From the purely economic standpoint hindrances to the free importation and exportation of goods are to be condemned.

Value in International Trade.

The careful reader will have noticed that if people in country A obtain g^1 by exchanging g^2 for it, then, obviously, the expense of obtaining g^1 to them is not governed by the expense of producing g^1 in country B but by the expense of producing g^2 in country A. If England (or rather people living in England) obtain raw cotton by exporting machinery, the value of the raw cotton is measured, not by the expense to Americans of producing cotton, but by the expense to Englishmen of producing machinery. Now we have already seen that the value of goods, where we can assume conditions of fairly free competition, is always indicated by their marginal utility, and must, in the long run, just cover their marginal expenses of production. But it appears that in international trade the value of goods does not always tend down to the marginal expenses of their production. Goods obtained from other nations exchange, not, ultimately, according to the marginal cost of producing them, but according to the marginal cost of producing something else, *i.e.*, the goods exchanged for them. Why is this ? It is because we cannot assume

reasonably free competition as between the productive units of different nations. We have seen that many things hinder the complete mobility of labour even within a given nation. Much more is this so as between two nations. The language, the habits of life, the modes of production, the religion, and the environment generally of two nations, not far removed geographically, may be completely different.

In less than an hour a British workman may pass into an area where hardly a single thing, from Sunday clothes to tobacco, is like the things to which he is accustomed. For such reasons we find that the labourer of one country does not compete with the labourer of another in anything like the same degree as labourers compete within a nation. An economic advantage of small dimensions is not usually enough to bring about the migration of the labourer to another country.

In respect of capital the argument is less forcible. Capital in its loanable forms, is now very mobile. But the average investor is far more likely to prefer a home, to a foreign investment at something like the same yield. Thus competition is imperfect ; a greater inducement is necessary to make capital and labour flow abroad than from one part of a given nation to another. Nations, economically speaking, are *non-competing groups*, within which there is pretty free competition, as between which competition is absent or at best imperfect. Thus we cannot say that the value of newly produced ordinary commercial commodities entering into international trade must, under normal conditions, and when the forces of competition have had time to operate, equal the marginal expenses of producing them. How then are such values determined. Let us revert to our arithmetical example.

The amounts of g^1 and g^2 produced at a given expense in the two countries respectively was

in A as 5 is to 10
,, B as 5 is to 7

Now since, in A, 5 units of g^1 can be obtained by sacrificing 10 units of g^2, people in country A will never give more than 10 (g^2) for 5 (g^1). And, as in country B, 7 units of g^2 can be

obtained for a sacrifice of 5 g^1, people in B will never take less than 7 g^2 for 5 g^1. Thus the ratio at which the goods will exchange will always lie between

$$5\ g^1 \text{ for } 10\ g^2,$$
$$\text{and } 5\ g^1 \text{ for } 7\ g^2.$$

In other words, the limits within which the value in exchange of the articles can fluctuate are determined by the ratios between the expense of producing them in the two countries. If we speak of the value in international trade of 5 g^1 we can say that it can never exceed 10 g^2 and never be less than 7 g^2, *i.e.*, the limits of its value are determined by the expense of producing what it will exchange for in country A as compared with the expenses of producing what it will exchange for in country B. Now, apart from international trade, 5 g^1 would, in country A, normally exchange for 10 g^2. If people in country A therefore can obtain 5 g^1 for anything less than 10 g^2 they will gain. Free exchange in international trade means that, under normal circumstances, people in country A cannot lose and may gain by international trade. And this will be equally true of country B, the inhabitants of which will not in normal circumstances get less than 7 g^2 for 5 g^1 and may get as much as 10 g^2. If each country then specialises in the trades in which it has the greatest relative advantage neither can, under normal conditions, lose and both are likely to gain. One country may absorb all the gain, but this condition of things is exceptional. For how will the actual terms of exchange, between the limits we have seen to be fixed, be determined? The answer is: by the play of demand on both sides. Let us suppose trade to open when 5 g^1 is exchanging for 10 g^2. Then country A is paying the highest possible price for the g^1 it imports. Its inhabitants gain nothing by buying abroad. They may just as well buy at home, and they will tend to do so. Thus, on these terms of exchange, we may well imagine the demand of people in A for g^1 to be small. But the demand of people in B for g^2 is likely to be large, for they get the highest possible price for g^1, a

much higher price than they can get by selling at home. Thus we may suppose the demand for each article at this price to be out of equilibrium.

Ratio 5 g^1 exchanges for 10 g^2
demand of A for g^1 50 units.
demand of B for g^2 100 units.

Under such conditions the value of g^2 in terms of g^1 must rise and the value of g^1 in terms of g^2 must fall. The ratio will then become

5 g^1 exchanges for 9 g^2,

and if this does not establish equilibrium between the demand of each country for the goods of the other, price will again change until equilibrium *is* established, and we may legitimately suppose that, at a price of 5 g^1 for 8 g^2, A will demand say 70 times 5 g^1, whilst B will demand 70 times 8 g^2. Equilibrium will be established, and, unless trade conditions alter considerably, the terms of exchange thus established will tend to remain.

Thus the value of goods entering into international trade will depend upon the action of reciprocal demand (*i.e.*, the demand of each country for the goods of others, as compared with the demand of other countries for its goods) operating between limits fixed by the comparative cost of the goods entering into trade.

The reader will see, further, that the people of a country purchase the goods they import by the goods they export. The exports are the sacrifice which they make to obtain goods for consumption. Exports are the *expense* of producing imports. To make it difficult to get imports is to make it more costly to live. To impose, in country A, an import duty on g^1 is, virtually, to increase the expense of delivering g^1 in country A, and, probably, to divert energy from the more advantageous production of g^2 to the less advantageous production of g^1. He will also see that the value of the exports and the imports of any country must be equal, that we cannot get, except quite temporarily, goods of a greater value than we

give, nor can we give a greater value than we receive. If at any time there is a want of equivalence between those values then the values will change owing to changes in demand. To explain this more fully we must proceed further.

Metallic Money in International Trade.

Hitherto we have regarded foreign trade as a process of barter. Let us now suppose it to be conducted through the medium of metallic money, and, as the almost universal metallic standard money, in civilised countries, is gold, we may suppose goods to be sold for gold. Nations do not normally sell goods to nations or buy goods from nations. But individuals or firms in one nation buy from, or sell to individuals or firms in another nation. These goods are bought and sold in terms of gold, and, were no substitutes for gold possible, sellers would receive payment in gold, and buyers would remit gold for their purchases. Let us suppose this actually to be the case; and let us imagine that the total purchases of merchants in country A from other countries are greater in value than the total purchases of merchants in other countries from merchants in country A. Then, if all settlements are made in gold, more gold will flow out of country A than flows into it, for there is a balance of indebtedness against the merchants of country A. But what will be the effect of this? The quantity of gold in use as money in country A will be diminished, and prices will fall. At the same time the quantity of money elsewhere will increase and prices elsewhere will rise. A, therefore, will be a comparatively unprofitable place to sell to, for it is a comparatively low price country. It will be a comparatively good place to buy from for the same reason. Foreigners will begin to buy more largely from it; *i.e.*, its exports will tend to increase, foreigners will diminish their sales to it, and its imports will tend to diminish. And such an adjustment will take place not only by the action of foreign merchants, but, simultaneously by the action of home merchants. Foreign countries are now high price countries. The merchants of A will therefore sell abroad as much as they can, and will buy

abroad as little as they can. Thus, at both ends, as it were, forces will be set to work diminishing imports and increasing exports. This will continue until the equilibrium of exports and imports has been attained, and the balance of indebtedness no longer exists. Indeed it may, and probably will, temporarily go farther than this, until exports exceed imports in value ; then the opposite forces will be set to work and equilibrium again reached, and even passed. Thus, assuming goods to be bought and sold for gold, and gold actually to pass, there cannot, for any length of time, be any want of equivalence between the value of the imports and of the exports of any given country. For the very excess in the value, either of the imports, or of the exports, at once tends to set in motion forces which bring the values of imports and exports to equivalence again.

In this sense exports are paid for by imports, imports by exports, and any diminution or increase in the value of the one will be followed by a diminution or an increase in the value of the other. It will further be seen, that, as a result of these forces, when the precious metals are used as money the precious metals themselves will tend to be distributed, as between the nations in the area of their use, exactly as if they were not used at all and trade were a process of barter. For trade will always be tending towards the point at which, were anyone in a position to command the whole commercial forces of any given country, he could obtain all its imports by bartering its exports for them. Thus the foreign trade could be carried on without the use of money. If exporters from country A could but exchange credit with the exporters to country A, then, international trade would not, indeed, be barter, for each transaction would be separately settled by a credit instrument, but, in effect, the imports would be obtained in exchange of exports. This is precisely what does take place. Here we come to reality, for international trade is conducted by means of paper credit currency, gold only moving from one country to another in settlement of debts but very rarely indeed.

The Foreign Exchanges and International Trade.

The nature of the foreign exchanges has already been explained.[1] Let us again suppose that merchants in country A having been importing goods to a greater value than that of the goods exported. Then a balance of indebtedness remains against the merchants in country A. Now the creditors of those merchants either have power to draw bills upon merchants in A or they must receive remittances from them. Both methods of payment, we may be sure, will be adopted. Let us suppose that country A, like England, is a country upon which creditors, as a rule, draw bills. These bills will be drawn in terms of the currency of A, say in pounds sterling. The debtors duly draw their bills and go to the banks or bill brokers in their own country to sell those bills for, let us say, francs. But they find many other people acting similarly. Many merchants wish to sell bills on A, drawn in pounds, for francs. But not so many merchants go to the brokers to buy bills in pounds for francs. For goods have been sold to A in excess of the goods bought from A. Thus the supply of bills on A is in excess of the demand for them. Their value in francs, therefore, must fall, to the loss of those with bills to sell and the gain of those who have to buy bills for remittance. Instead of £1 fetching fr. 25·31 let us say, the seller finds he can get only fr. 25·28; then, as the excess of bills for sale becomes more apparent the exchange sinks until Mint par is passed and the exchange is definitely against A at fr. 25·20, fr. 25·17, and so forth, down to specie point. What does this turn of the exchange against A mean to our merchant who has drawn a bill on a firm in A against the goods sold. It means that his price is lower by the difference between the rate of exchange when he made his bargain and the rate of exchange when he sells his bill. A has become a low price country and his next sale will be, if possible, to some other country than A.

But, to take the second alternative, suppose the buyer in A

[1] See p. 148.

has to send his foreign creditor a remittance drawn in terms of the currency of the country to which he is to remit. He will find when he purchases such a remittance that the rate of exchange is now (to use the French exchange again, as illustration) not £1 for 25·31 francs but £1 for 25·16 francs. Thus to purchase a bill for 10,000 francs will cost him more than at the more "favourable rate" of exchange. For every pound of the purchase money he will get ·15 franc less than formerly. Thus, foreign prices have risen to him. He will be less inclined to buy abroad than before. Thus at both ends again there will be an adjustment tending to diminish the imports into A. The foreigner finds A a low price country. The native of A finds foreign prices high. But the very facts which make it unprofitable to import into A make it profitable to export from A. The merchant in A who sells to the foreign countries can, if he sells in terms of francs get £1 of his own money for every fr. 25·16. The foreign buyer, if he buys from A for pounds sterling, gets a remittance in pounds at the rate of 25·16 fr. Thus, at both ends, at home and abroad, forces will be at work tending to diminish imports into A and to increase exports from it. And this will continue so long as exchanges remain "against" A, which country, to acknowledge what has become fairly obvious, is the United Kingdom.

Thus, imports exceeding exports, the effects on the foreign exchanges will be such as diminish imports and increase exports. Should exports exceed imports in value the opposite set of forces will be set to work. If we have been exporting to excess, bills upon London will be in great demand, for foreign debtors will require remittances to send to their creditors here. The demand for such bills (since we have sold more goods than we have bought) will be in excess of the supply and the exchanges will tend to be above Mint par, or "for" us. This means that English prices are to foreigners high, for to pay £1 they have to give more francs, or dollars, or marks, than usual. They, therefore, will, as far as possible, diminish their purchases from England. The English merchant will

be under a precisely similar inducement to cease to sell abroad in foreign prices. But foreign merchants will like to sell to England; because, for every £1 worth of goods sold they can get a greater amount of money than usual; and England will tend to buy abroad; for £1 will purchase, not fr. 25·12, or 20·30 marks worth of goods but fr. 25·35, or 20·50 marks worth. Thus, forces will be set to work to increase imports and diminish exports. And the value of imports and expors will tend again to equilibrium.

It is, therefore, true in substance to say that imports are paid for by exports. The importers are not paid by the exporters, but, owing to the use of bills of exchange and other paper credit instruments, their debts are cancelled against each other, just as effectually as are cheques in a clearing house. The bill brokers and discount houses and foreign banks, who, here or abroad, purchase bills from the sellers of goods, and sell bills to the buyers of goods, virtually act as clearing agents. They convert goods into currency just as the home bankers do for the home trade.

No country need, then, fear that its inhabitants can import too much. They cannot buy more than they can pay for; and they not only do, but must, pay for the goods they buy from abroad by the goods they sell to abroad. The fear that our home trade can, permanently, be damaged by imports is merely an ignorant superstition of the same kind as the idea, cherished, among others, by Napoleon Bonaparte as well as less distinguished men, that England can be drained of gold. For hundreds of years gold has never been used in international trade except as a last resort. The foreign bill of exchange is one of the most ancient of commercial instruments, and, indeed, its use as a means of remittance abroad was *commanded* by a statute of Richard II. When exchanges are approaching either specie point, automatic forces are set to work, by the very position of the exchanges, which tend to bring them back again towards par. And these automatic forces are very soon augmented by the direct action of the magnates of finance. People will not take gold abroad in

satisfaction of ordinary debt because it does not pay them so to do; and the exchanges can never remain for any time in a condition which makes the export of gold to pay ordinary debts anything but unprofitable.

It is, however, a commonplace that the trade returns of nations do not display that equivalence between imports and exports which we have shown must exist. The explanation is simple and may be put into a single phrase: the trade returns of countries are never a true and complete account of the international trade transactions of those countries. This we will proceed to explain.

The Balance of International Indebtedness.

On the frontiers of every state there are stations called, in the United Kingdom, Customs Houses, at which account is rendered of the quantity and value of all the goods, imported into or exported from a country, whether dutiable or not. Such accounts are necessarily imperfect for (*a*) many of the most important classes of goods never pass through a customs house at all; (*b*) the values of the goods which do pass through are differently recorded at different customs houses.

(*a*) Nations export and import not only visible and tangible, but invisible and intangible goods. The United Kingdom, for instance, or rather individual British people, or firms, sell to other nations the use of capital, the services of ships, banking services, agency services, and so forth. These goods are not visible, but they are obviously as much exports as Cheddar cheese, or Bass's beer, or pig-iron, or other goods which pass through the Customs House in tangible form. If I go to the grocer and purchase a pound of tea, the grocer has, obviously, exported something to me and I have imported something from him, and all the world (if I care to show the tea) can see it; but if I consult a solicitor and receive advice which enables me to collect an otherwise bad debt, his service to me may be far more valuable than the pound of tea. I may have to pay a good deal for that service. The most valuable of all kinds of

production is the production of goods which do not, at first, at any rate, take tangible form. So a country, in exporting invisible services, may be conducting a very valuable form of business, profitable to those who sell such services, useful to those who buy them.

(*b*) When a bale of cotton leaves Galveston or New Orleans its value is recorded free on board. That is to say, its selling price delivered on board ship in the port is recorded as its export value. When the same bale of cotton arrives in Liverpool its value as an import is recorded, "c.i.f." (cost, insurance, freight), that is to say, to its value as recorded at the American port, the expenses of delivering it at Liverpool are added. The same goods therefore figure at one valuation as an export and at a higher valuation as an import. If this method is observed with regard to all goods transported from one country to another, obviously the goods imported by the civilised world will be of higher value than the goods exported. And this superficial paradox does exist. The difference between the values of goods as exports and the values of the same goods as imports, therefore, consists of the value of the services rendered in insuring and carrying such goods, and the countries (or rather the people in them) who perform such services receive that value.

Thus in making up the balance sheet of the imports and the exports of any given state more things have to be included than the values of goods passing through the Customs House. Account must be taken of other items of which the following is a fairly complete list :

Exports	Imports
1. Goods sold by way of trade.	1. Goods bought by way of trade.
2. New capital exported.	2. New capital imported.
3. The use of capital already exported.	3. The use of capital already imported.

EXPORTS	IMPORTS
4. Interest on capital already borrowed.	4. Interest on capital already lent.
5. Shipping, banking, insurance and other services.	5. Shipping, banking, insurance and other services.
6. The payment for such services rendered by foreigners.	6. The payment for such services rendered by the importing country.
7. Government expenditure abroad.	7. The expenditure of foreign governments here.
8. Expenditure of tourists abroad.	8. The expenditure of foreign tourists here.
9. Charitable donations sent abroad.	9. Charitable donations received at home.
10. Remittances of profits and salaries by foreigners resident here.	10. Remittances of profits and salaries by Englishmen resident abroad.
11. Extraordinary payments to other countries, *e.g.*, a war indemnity.	11. Extraordinary payments received from other countries, *e.g.*, a war indemnity.

If the value of all these items were included in the trade returns of a country, then, under normal conditions, the values of exports and imports would, approximately, balance. The only reason which could cause any excess on either side would be a large excess of capital lent to other countries over capital borrowed from them, or *vice versâ*. For an export of capital no immediate equivalent is returned. A loan is neither an exchange nor a sale, but a loan. But an export of new capital tends, of course, to swell the future imports of tangible goods sent by way of interest.

The explanation of our apparent standing excess of imports above exports is now simple. The United Kingdom is by far the greatest exporter of shipping, banking, insurance, and merchant and agency services in the world. Especially is this the case with shipping. The value of the shipping services we

render probably exceeds the value of those rendered to us by £100,000,000 in a year. The payment for these services comes to us in goods. The foreigner to whom these services are rendered has to buy, in his own country, documents, drawn on London as payment for goods sold to London. The credit he thus acquires, he remits to London in order to enable him to pay the shipping companies or others, for services rendered. Thus the goods sold to London are, in effect, made to pay for the services our shippers and others have rendered to foreigners; and those goods figure in our returns of imports. But the services for which they are the payment do not figure in our returns of exports, for they have never passed through the customs house.[1] So we receive, in a precisely similar manner, probably another £100,000,000 as interest, annually. This is included in our returns of imports, but the service represented by the annual use of that capital is not included as an export. These two items more than account for the apparent excess of the value of imports over the exports of the United Kingdom, which varies in recent years to from 140 to 180 millions sterling. As a matter of fact, so far is it from being true that we have a real excess of imports over exports, that the opposite is true; for we annually export millions of capital to foreign countries. Or to put the same truth in a rather more accurate form, our apparent excess of imports over exports would be much greater than it is, did not British citizens annually leave abroad for investment large masses of wealth which they are entitled, if they please, to have sent here.

Thus we have concluded our consideration of the main principles which govern International Trade. Questions of political policy concerning international trade, a general

[1] An instructive case is that of the value of new ships exported by British firms. A ship, when built in the British Islands to foreign order, sails away when finished. It does not pass through the Customs House. Thus, for years, the value of a most important part of our export trade did not figure in our returns of exports at all. This has been remedied since 1897. But it only shows how misleading the bare figures of official returns, not properly understood and interpreted, can be.

elementary treatise does not afford scope to discuss. Free exchange, free importation, free exportation, are the logical conclusion of the truths we have demonstrated. A country which places obstacles in the way of foreign trade will, according to the extent and efficiency of those obstacles, tend to be poorer than it otherwise would be. Such is the purely economic conclusion. But, if important political or social ends can be achieved by the policy of obstruction to free exchange, commonly termed Protection, they must be so achieved. This is a question of politics which we do not propose to discuss, a question upon which the opinion of economists, though it must carry weight, because politics here, as often, turn upon the subject matter of their science, is not final.

QUESTIONS

Many of the questions printed below are taken from the examination papers of the London Chamber of Commerce, by whose kind permission they are reproduced.

1. What methods of investigation are employed in Political Economy ?

2. What do you understand by an Economic Law ?

3. What do you mean by Wealth ?

4. State whether you consider the following to be wealth, and give reasons for your answer : Air, Ship, River, Canal, an Insurance Policy, a Good Ear for Music.

5. Explain, by means of examples, the difference between an Economic Law and a Law of Nature.

6. Compare the methods of Economic Science with those of (*a*) Astronomy ; (*b*) Physiology.

7. Define Capital. Enumerate the most important forms of invested capital in the country in which you live.

8. Explain Cost Value and Market Value, and state the relations existing between them.

9. On what does Market Value depend ? Explain, with the aid of a diagram, final or marginal utility, total utility, consumer's rent.

10. Explain how utility is affected by the exchange of goods or services.

11. What distinctions, if any, must be made between the wealth of nations and the wealth of individuals ?

12. Explain what you mean by the Production of Wealth.

13. By what tests would you decide whether a particular industrial worker was or was not productively employed ?

14. Explain the working of the laws of Supply and Demand in relation to the price of wheat.

15. What do you understand by Elasticity of Demand ?

16. Would you say that the demand is elastic in the case of (*a*) bread ; (*b*) sugar ; (*c*) ships ; (*d*) horses ?

17. Give definitions of the terms Utility and Value.

18. Give a brief account of the following :—The Principle of Substitution ; Purchaser's Surplus ; Increasing Returns in Manufacture.

19. State clearly what you understand by Joint Demand and Composite Demand.

20. How is value determined under Monopoly conditions?

21. In which industries do we find respectively that (*a*) small businesses are being exterminated by the competition of big businesses; (*b*) small businesses occupy the field to the practical exclusion of big businesses; (*c*) large and small businesses exist side by side?

22. Explain fully the meaning of the term "Market."

23. In order that the market for a commodity must be very large, certain conditions must be satisfied. What are these conditions?

24. How is the market price of a commodity determined?

25. On what grounds is land distinguished from capital in economic study?

26. What is the relation between price and cost of production?

27. State what you know of Ricardo's Law of Rent.

28. Is the Theory of Rent applicable to urban land?

29. What is the difference between agricultural rent and economic rent in the country, and between economic rent and ground rent in towns?

30. "A thing is worth as much as it will fetch." Discuss the notion of value here employed and its relation to normal value.

31. Explain the nature and cause of value.

32. What are the causes which favour the accumulation of capital?

33. "All capital must be saved; all capital must be spent." What is the meaning of this?

34. What is the law which governs the rate of interest?

35. Does the law of economic rent find a place in any form in the analysis of wages and profits?

36. "A shopkeeper in a fashionable and much frequented street will say that he charges high prices because he has to pay high rent." Examine this statement, setting forth the theory of economic rent and showing the true relation between rent and price.

37. Explain as fully as you can the meaning of the term "Profits."

38. What is the difference between Gross and Net Profits?

39. Examine the statement that "Profits tend to an equality."

40. Under what conditions do net profits exist?

41. "New machinery creates unemployment." Is the foregoing statement true?

42. Does the introduction of machinery lessen the total demand for labour ?

43. What are the chief advantages of division of labour ?

44. In what ways and to what extent does division of labour tend to industrial efficiency ?

45. What, if any, are the limits beyond which division of labour is economically disadvantageous ?

46. What are the economic laws determining wages ?

47. Can the rate of wages be modified by combinations of wage-earners or by State interference ?

48. Explain the meaning of the following phrase: "The Iron Law of Wages."

49. Distinguish carefully between Real and Nominal Wages.

50. Explain the relation of "Efficiency" to general welfare in a community. Consider specially efficiency of labour, what it implies, and how it can be augmented. Can there be excess skill ?

51. Show with illustrations how the economic condition of a country is affected (1) by an improved organisation of its industries ; (2) by the introduction of a better system of transport.

52. Discuss the effects of the development of labour-saving machinery upon (*a*) wages ; (*b*) security of employment.

53. Explain briefly the advantages enjoyed by large and small businesses.

54. It is said that the three essentials for the production of wealth are land, labour, and capital. Is that a complete statement, or is anything else required for the successful conduct of industry ?

55. Explain the Malthusian theory of population. Upon what evidence or reasoning was it based ?

56. How has the theory of Malthus regarding population been affected by recent knowledge and experience ?

57. What are the chief functions of money ? Do you regard a Bank Note, Cheque and Silver Coin as money ?

58. "When the value of money increases the value of commodities decreases." Examine this statement.

59. On what does the value of money depend ?

60. Examine carefully the connection between the Bank Rate of Discount and the Rate of Interest.

61. "Any monetary system must be based on confidence." Examine this statement.

62. Why does everybody place such confidence in gold?

63. What are the qualities that a material which is to be a standard money should possess?

64. What do you understand by token coinage?

65. Explain the working of Gresham's Law.

66. Explain briefly the theory of general prices.

67. What are Index Numbers, and for what purposes are they used?

68. Describe the nature and service of credit, and state its most active forms in Great Britain.

69. What is meant by Inflation of Credit? Illustrate by some particular case, giving its cause and effects.

70. What do you understand by the Quantity Theory of Money?

71. Give a brief account of the circumstances which led to the formation of the Bank of England.

72. The Bank Charter Act of 1844 provides that the Bank of England must issue a Weekly Return. What information does this Return contain?

73. What were the chief objects in view when passing the Bank Charter Act of 1844? Has the Act fulfilled the purposes for which it was passed?

74. Explain "The Mint Price of Gold"; "The Value of a Sovereign."

75. Give a brief account of the principle of foreign exchanges.

76. Explain the meaning of Convertible and Inconvertible Paper Money.

77. What safeguard must be taken in regulating the issue of (*a*) Convertible; (*b*) Inconvertible Paper Money?

78. What advantages and what disadvantages are incident to large production?

79. State the several forms under which production is organised.

80. Explain the principles of Co-operation.

81. Give a short account of any notable co-operative society.

82. Define or explain the meaning of (*a*) Cartels; (*b*) Trusts.

83. Give a short account of the Law of Diminishing Returns in Agriculture.

84. Examine the merits and defects of Trusts.

85. Give a brief account of the distinctive forms of co-operative employment characteristic respectively of Great Britain and Ireland.

86. What sort of businesses are most frequently undertaken by municipalities? Explain the reason for the selection of these particular industries as fields for municipal enterprise?

87. Explain the laws of (*a*) Diminishing Returns; (*b*) Constant Returns; (*c*) Increasing Returns.

88. "Division of Labour is limited by the market." Examine this statement.

89. What are (*a*) the general causes; (*b*) the particular causes of the localisation of industry?

90. What are the two greatest influences which determine the physical condition of a people?

91. State the probable effects of the imposition by Great Britain of duties on imported wheat and pig-iron, taking into consideration all the interests concerned.

92. Explain with examples why the exports of some countries exceed the imports, while the imports of others exceed the exports.

93. How far is it true that the volume of exports is the best test of the prosperity of a nation? Is it ever advisable to tax imports?

94. How far, in your opinion, is the commercial and industrial advance of Germany and the United States accounted for by the progress in those countries of commercial and technical education?

95. What factors, other than education, are of prime importance to the industrial efficiency of the population?

96. Explain the "One-Reserve" System of banking. Describe the employment of the Bank Rate both as an Effect and as a Cause.

97. Discuss the advantages and disadvantages of the nationalisation of railways from the point of view of: (*a*) National Finance; (*b*) The Interests of Businesses served by the Railways; (*c*) The Interests of Railway Employees.

98. The suggestion has been made that raw materials should be imported free of duty, but that imports of manufactured articles should be taxed in proportion to the amount of labour embodied in them. Explain how this policy would affect home industries if put into practice.

99. Describe the effects of a rapid transition in a country from domestic to machine or factory industry. Illustrate from the case of the English industrial revolution.

100. Give an account of the fluctuations in the last twenty years in the price of Consols.

London Chamber of Commerce.

Questions set at the Examination for Senior Commercial Certificates and Teachers' Diploma, 1911.

Instructions to Candidates.

Not more than eight questions to be attempted. Candidates for the Teachers' Diploma must in answering the eight questions include **11**, **12** *and* **13**.

1. Explain what is meant by "marginal utility" and "marginal cost of production"; and show what these have to do with the determination of price.

2. How far is it possible to deduce Laws of Wages from the Theory of Value? Illustrate your answer by the consideration of the cases of wages in (*a*) agriculture, (*b*) coal-mining, (*c*) cotton weaving.

3. Explain the forces which determine the rent of agricultural land. What would you expect to be the effect on agricultural rents of (*a*) a marked success in the efforts now being made for the improvement of the Science of Agriculture, (*b*) a rapid increase of vegetarianism.

4. Give some account of the functions and dangers of credit in modern industry; and of the credit instruments in most common use.

5. Give some account of recent fluctuations in the Bank Rate, and of the considerations which have to be taken into account in fixing it.

6. Give some account of the recent fluctuations in the price of rubber. What light is hereby thrown upon (*a*) the conditions determining the price of commodities subsidiary to important industries, and (*b*) the effect of the exploitation of the tropics on industry in temperate climates.

7. Sketch the progress towards monopoly hitherto made in one or more of the following industries:—

(*a*) Mineral oil, (*b*) tobacco, (*c*) diamonds, (*d*) textiles, (*e*) steel.

Give an estimate of the probable results on social well-being of monopoly in each industry.

8. Explain why water supply is so commonly a municipalised industry in Great Britain. Give some account of the manner in which one or more important undertakings are conducted.

9. Give an account of the different forms of public indebtedness in the United Kingdom; of the manner of raising existing loans;

their purposes, and the provision made by law or custom for repayment. Do you consider the low price of Consols now current a public calamity?

10. Explain the meaning of the following phrases:—

(*a*) Incidence of taxation.
(*b*) Taxation at the source.
(*c*) Prime cost.
(*d*) Social capital.

11. Explain as clearly as you can the position of Trade Unions in the eye of the law, as determined by recent legal decisions. Do you consider that the power of Trade Unions to influence wages and conditions of labour has been increased or diminished by recent events, or by the course of economic development?

12. Explain the nature and extent of the control exercised by the State over railways in the chief parts of the British Empire, the United States and the most advanced countries of Europe. Criticise briefly each system of national control.

13. Discuss, in the light of recent experience, the doctrine that protection of agriculture and protection of manufacture must stand or fall together.

Royal Society of Arts

Questions set at the Grade II. Examinations in Economics, 1911.

Six questions and not more than six, to be answered. Candidates who aim at a First-class Certificate must select their six questions by taking two from each group, A, B, and C.

A.

1. What is the economic meaning of Wealth? Consider how far it is possible to compare the wealth of widely differing communities, such as England and Persia.

2. In what various ways has Fixed been distinguished from Circulating Capital? Consider the probable results of an extensive alteration of circulating into fixed capital.

3. Show how the Rate of Interest is fixed in a modern community, with a special reference to pecularities in the supply of loanable Capital.

4. Enumerate the various methods of payment of Wages in England, and consider their suitability to various forms of industrial organisation.

B.

5. "The worth of a thing
Is what it will bring."

Can this old rhyme be accepted as an account of economic value? If not, why not?

6. Define Money; and show the importance of having a good money in a community.

Enumerate some of the materials that have in the past been used as money, and state the reasons why these materials have been superseded by the precious metals as the money of civilisation.

7. What is a Bank? How does the Bank of England (*a*) resemble, (*b*) differ from, other banks?

8. State the chief causes of Premium and Discount in the Foreign Exchange. What are the usual limits of these fluctuations?

What is meant by a Mint Par? Having given that an English Sovereign weighs 7·988 grams, and that 3100 Francs gold contain 900 grams fine, calculate the French Mint Par of the Sovereign.

C.

9. Give an account of any two of the following—Corn Laws, Mercantile System, Navigation Acts.

10. Sketch the causes and the results of the principal immigrations of foreigners into England.

11. State the main provisions of the Bank Charter Act of 1844. Give an account of the purposes aimed at by the framers of that Act; and show how far, in your opinion, those purposes have been attained.

12. Trace the rise and fall of the Combination Laws.

Royal Society of Arts.

Questions set at the Grade III. Examinations in Economics, 1911.

Six questions, and not more than six, to be answered. Candidates who aim at a First-class Certificate must select their six questions by taking two from each group, A, B, and C.

A.

1. State fully and accurately the two Laws—Diminishing Return and Increasing Return; and show to what extent

Diminishing Return operates in the Factory, and Increasing Return in the Field.

2. To what extent, if any, can (*a*) the prevailing Rate of Interest, (*b*) the Price of Consols, be cited as evidence of prosperity or the reverse? Give full reasons.

3. If a West-end shopkeeper were asked to justify his demand for higher prices than those at which the same goods were obtainable in the East End, he might perhaps reply—"Consider the heavy ground-rent that I have to pay."

Examine this reply in the light of economic theory.

4. State the nature, extent, and limitations of the powers of a Monopolist. Describe the action of the chief economic forces which tend to hold those powers in check.

B.

5. Define Credit, and examine the influence of credit on prices. What is meant by the assertion that all English credit rests on a metallic basis?

6. A recent writer has said of Money that, "It is quite unnecessary to make it of any valuable material." Examine this statement fully, distinguishing clearly between money and substitutes for money.

7. What would be the chief economic effects of the discovery of fertile gold-mines in England?

8. Explain the terms Futures, Options, Put and call, Straddle. Consider the pros and cons of dealing in futures.

C.

9. Give some instance in which the advance of physical science has directly contributed to the improvement of economic theory.

10. Give a critical and historical account of the institution known as the Staple.

11. In the course of the debate on the Resumption of Cash Payments (1819), Sir Robert Peel asked in the House of Commons the celebrated question, "What is a Pound?" Answer the question, and show its precise bearing on the discussion then before the House.

12. What do you know of the Case of Allen *v.* Flood, the Taff Vale Case, the Right to Work?

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